This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

KSF130

1082.

Samuel Henshaw

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.,

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College,

AND IN HIS ABSENCE BY

WILFRED MARK WEBB, F.L.S.,

Lecturer on Biology and Nature Study to the Surrey County Council.

London:

JOHN BALE, SONS & DANIELSSON, LTD.,

OXFORD HOUSE,

83-91, GREAT TITCHFIELD STREET, OXFORD STREET, W.

—

1907.

KSF 130

HARVARD
UNIVERSITY
LIBRARY

INDEX.

(*The names of books reviewed are printed in italics.*)

Abnormal Carrot, 177.
Abnormal Dandelion, 178.
Address, Presidential, by The Right Hon. Lord Avebury, D.C.L., F.R.S., 81.
Advertising, National Society for Checking the Abuses of Public, 45.
Agriculture and Fisheries, Board of, Leaflets, 149, 211.
Ailsa Crag, 65.
Alien Plants, 29.
Aliens, Undesirable, 224.
Almy, P. H. W., *Torquay and its Surroundings*, 191.
American Weed and Wild Fowl, 212.
Animal Artisans, by C. J. Cornish, 53.
Animal Kingdom, by Edric Vredenburgh, 17.
Annual Soirée, 89.
Answers to Correspondents, 7, 31, 40, 60, 80, 120, 140, 160, 180, 200, 220, 232.
Ant Colonies, 225.
Antler, A Malformed, of a Red Deer, 192.
Ants, Swarming of, 196, 214, 225.
Ants, The Senses of, as regards Heat and Light, by Oscar C. Silverlock, 165.
Appearances, Late, of Flowers, &c., 216, 225.
Archæological Notes, 32.
Aria, Mrs., *Costume*, 67.
Arnott, S., *Bulbs*, 192.
Ashdown, Charles H., *The City of St. Alban, its Abbey and Surroundings*, 146.
Astronomical Notes, 8, 33, 51, 66, 117, 138, 157. 178, 198, 217, 223.
Avebury, The Right Hon. Lord, D.C.L., F.R.S., Presidential Address, 81.
Aylesbury and its Surroundings, by Walter Moore, 76.
Ayr, The Auld Brig of, 45.

Baker, T. Thorne, F.C.S., F.R.P.S., *Colour-correct Photography*, 37.
Balance Sheet, 134.
Bampton Cliffs, The Birds of, by E. W. Wade, 147.
Bee Orchid, 156.
Bee Stings, 176.
Beebe, C. William, *The Log of the Sun*, 53.
Bennett, F. J., *Story of a Kentish Village, Ightham*, 112.
Bennett, F. J., *White Horse Stone and its Legend*, 208.
Bentham, George, by B. Daydon Jackson, 15.
Biology, Elementary Science for Preliminary Certificate Examination, by W. S. Furneaux, 34.
Bird Instinct, 152.
Bird Life in the Vicinity of South-East London, by Ernest Edgar Howe, 21.
Bird Life, Photographs of, by R. B. Lodge, 71.
Bird Life of the Borders, by Mr. Abel Chapman, 65.
Bird Notes from Highgate, 213.
Bird Notes in Normandy and Central France, 161, 223.
Bird Protection, 64.
Bird Protection in Hungary, 170.
Bird Protection Orders, 136, 170, 186.
Bird Protection *versus* Bird Destruction, 150, 174.
Bird Striking a Tree, 29.
Birds, A Garden full of, 150, 173, 174, 195.
Birds and Berries, 47.
Birds and their Nests and Eggs found in and near great Towns, by George H. Vos, 146.
Birds and Wire Netting, 96.
Birds, How High they Fly, 48.
Birds in Towns, 150.
Birds, London Wild, 184.
Birds of Bampton Cliffs, The, by E. W. Wade, 147.
Birds of the Countryside, by Frank Finn, 71.
Birds of the World, by Edric Vredenburgh, 17.
Birds of Paradise, 187,
Birds' Restaurant, 7, 31.
Birds (Shown to the Children Series), by M. K. C. Scott and J. A. Henderson, 36.
Birds, The Common Wild, of Great Britain, by David S. Price, 71.
Birmingham and Midland Branch, 18, 58, 76, 157.
Bittern, A, 29.
Blackbirds, Pied, 48.
Black Caps, 31.
Black Currant Mite, 136.
Blackie's Nature-Knowledge Diary, by W. Percival Westell, 94.
Book of the Open Air, The, edited by Edward Thomas, vol. i., 91, vol ii., 148.
Botanical Gazette, 192.
Botany Rambles, by Ella Thompson, 15
Bower Birds' Nests, 49, 65.
Boulger, Professor G. S., *Familiar Trees*, 36, 171.

Brain of the Lower Animals as compared with that of Man, by F. W. Watts, 182.
Branches, New Junior, 17.
Branch Payments, 135.
British Association, 141.
British Birds and their Eggs, 17.
British Birds, 148, 211.
British Mammals, Photographs of some Smaller, by Douglas English, 71.
British Ornithologists' Club, Bulletin of, 146.
British Seed Plants and Ferns, A List of, 75.
British Trees, Photographs, by Francis Geo. Heath, 94.
British Tunicata, vol. ii., by the late Joshua Alder and the late Albany Hancock, edited by John Hopkinson, 52.
Brodie, G., The Moorland Pines, 201.
Broomhall, W., *The Country Gentleman's Estate Book*, 147.
Bud Destruction, 117, 176.
Bulbs, by S. Arnott, 192.
Bullock's Museum, 197, 211.
Burr, Malcolm, *An Introduction to the Study of the Geology of the South-Eastern Coalfield*, 58.
Bury St. Edmunds and its Surroundings, by W. A. Dutt, 146.
Bush Episode, A, 221.
Buxton, Dr. Dudley (Chairman of Council), Address, Annual General Meeting, 121.

Camp Fires Club, Gold Medal of the, 64.
Canada Geese, 150.
Catalpa Tree, 196, 216.
Chapman, Mr. Abel, *Bird Life of the Borders*, 65.
Chats on Costume, by G. Woolliscroft Rhead, 34.
Chernes Cyrneus in Nottinghamshire; A Recent Addition to the Known False Scorpions of Britain, by H. Wallis Kew, 55.
Churches, Our Homeland, and how to Study Them, by Sydney Heath, 109.
Cinematograph in Ornithology, 207.
Cinematograph in Science, Education, and Matters of State, by Charles Urban, 149.
Claremont, Leopold, *The Gem Cutter's Craft*, 70.
Coalfield, The South-Eastern, An Introduction to the Study of its Geology, by Malcolm Burr, 58.
Colorado, University of, Studies, 147, 192.
Colour-correct Photography, by T. Thorne Baker, F.C.S., F.R.P.S., 37.
Comfrey, 51, 66.
Conversazione, The Annual, 101.
Conviction for taking Skua's Eggs, 170.
Convolvulus, 216, 225.
Copland, L., *Peat Moss in Galloway*, 61.
Cornish, C. J., *Animal Artisans*, 53.
Costume, by Mrs. Aria, 67.
Costume, Chats on, by G. Woolliscroft Rhead, 134.
Crosby Hall, 135, 141, 187, 207.
Crows, Hooded, 49.
Cuckoo, The, 137, 151, 173, 194, 212, 224.

Daisy, Freak of a Common, 30.
Davis, J. R. Ainsworth, *Thomas H. Huxley*, 75.
Days of a Year, The, by M. D. Ashley Dodd, 147.
Dead Leaves in a High Wind, 49.
Deshumbert, Mons., *Morale de la Nature*, 148.
Dew Ponds, by E. A. Martin, 148.
Dew-Ponds, Neolithic, and Cattle-Ways, by A. J. Hubbard and G. Hubbard, 210.
Dewar, G. A., *The Faery Year*, 12.
Do Dogs eat Carrion? 96, 149.
Dodd, M. D. Ashley, *The Days of a Year*, 147.
Dogs, The Muzzling of, 2.
Dormouse, 211.
Dove, H. Stuart, A Bush Episode, 221.
Ducks, 3.
Dutt, W. A., *Bury St. Edmunds and its Surroundings*, 146.

Eagles at St. David's, 7.
Ealing Bird Sanctuary, Notes on the, 50.
Ealing Scientific and Microscopic Society, Report and Transactions, 208.
Ecology, Introduction to Plant, by the Rev. Prof. G. Henslow, 91.
Editorial, 1.
Education Congress, 2.
Eggs Pierced, 195.
English, Douglas, *Photographs of some Smaller British Mammals*, 71.
Epsom College Natural History Society, Report for 1906, 95.
Erinus alpinus, 4.
Estate Book, The Country Gentleman's, edited by W. Broomhall, 147.
Evolution, A Picture Book of, by Denis Hird, 12.
Excursions, 18, 39, 59, 77, 98, 118, 139, 158, 178, 198, 217, 232.
Experiment worth Trying, 224.
Explicit qui possit, A Bird Phantasy, by Rachel, 41.
Extinction of Trees near Bournemouth, 27.

Faery Year, The, by G. A. Dewar, 12.
Fairyland of Living Things, 228.
Familiar Trees, by Prof. G. S. Boulger, 36, 171.
Farm and Garden Produce, Exhibition of, 64.
Field Path Rambles, by Walker Miles, 91.
Finches and Scotch Firs, 97
Finn, Frank, *Birds of the Countryside*, 71.
Flight, 226.
Flower, Sir William, by R. Lydekker, 15.
Flowers, Late Appearance of, 216.
Flowers (Shown to the Children Series), by Janet Harvey Kelman and C. E. Smith, 36.
Flowers of the Field, by the Rev. C. A. Johns, edited by Clarence Elliott, 142.
Fox and Badger, 114, 172.
Francklin, H., *Utility Fowls, Their Selection and Improvement and Diseases*, 37.
Friday Street, 116.
Fungi in North Wales, Exchange Desired, 178.
Furneaux, W. S., *Elementary Science for Preliminary Certificate Examination in Biology*, 34.
Future Forest Trees, by A. Harold Unwin, 10.

Gadwall, 65.
Garden full of Birds, 150, 173, 174, 195.
Garden Making, by E. O. Greening, 147.
Geese, Canada, 150.

Gem Cutter's Craft, The, by Leopold Claremont, 70.
Giant Trees, 7.
Gloucestershire, In Sunny, by D. Steward, 85.
Goats for Profit, by Edward C. Tibble, 37.
Goldfinches, 96.
Gooseberry Mildew, The American, 3.
Great Tit, 114.
Greene, The Rev. Joseph, *The Insect Hunter's Companion*, 147.
Greening, E. O., *Garden Making*, 147; *One and All Gardening*, 38.

Hagen, Marie, S., Destruction of Wild Roses, 29.
Harrison, H. S., *From Stone to Steel*, 57.
Haslemere Museum Gazette, 86.
Headley, F. W., *Life and Evolution*, 53.
Heath, Francis Geo., *Photographs of British Trees*, 94.
Heath, Sydney, *Our Homeland Churches and how to Study Them*, 109.
Henslow, The Rev. Prof., *Introduction to Plant Ecology*, 91.
Hertfordshire Natural History Society and Field Club, Transactions of the, 74.
Hird, Denis E., *Picture Book of Evolution*, 12.
Historic Links; Topographical Aids to the Reading of History, by D. L. Maguire, LL.A., 15.
Holiday Notes, 96
Hooded Crows, 49.
Hopkinson, John, *British Tunicata*, by the late Joshua Alder and Albany Hancock, edited by, 52.
Horner, D. W., *Observing and Forecasting the Weather*, 208.
Hornby, John, *Twenty Country Rambles Round Leeds*, 146.
Horse, The Intelligence of a, 4, 5.
Horticulture, Kelway's Manual of, 17.
Horticulture, Principles of, A Series of Practical Scientific Lessons, by Wilfred Mark Webb, 68.
Howe, Ernest, E., Bird Life in the Vicinity of South-East London, 21.
Hubbard, A. J. and G., *Dew-Ponds, Neolithic, and Cattle-Ways*, 210.
Hulme, F. E., *Wild Fruits of the Countryside Figured and Described*, 189.
Huxley, Thomas, by J. R. Ainsworth Davis, 75.

Ightham, The Story of a Kentish Village, by F. J. Bennett, 112.
Ingersoll, Ernest, *The Life of Mammals*, 36.
Ingersoll, Ernest, *The Wit of the Wild*, 142.
Insect Hunter's Companions, The, by the Rev. Joseph Greene, revised by A. B. Farn, 147.
Insect Life, The Story of, by W. Percival Westell, 208.
Irish Naturalist, 192.

Jackson, B. Daydon, *George Bentham*, 15.
Janet, Charles, *Anatomie de la tête Lasius niger*, 94.
Jefferies, Richard, *The Story of my Heart*, 67.
Johns, The Rev. C. A., *Flowers of the Field*, 142.
Johnson, Walter, Bird Notes in Normandy and Central France, 161.
Jones, Horace F., *Plant Life Studies in Garden and School*, 10.
Joseph, Leonard, *What are We?* 95.
Journalistic Hypocrisy, 187, 214.
Junior Branches, New, 17.

Kearton, Richard, *Fairyland of Living Things*, 228.
Kearton, Richard, *Nature's Carol Singers*, 9.
Kelway, *Manual of Horticulture*, 17.
Kelway, Janet, H. and C. E. Smith, *Flowers* (Shown to the Children Series), 36.
Kestrel at Close Quarters, 117, 152, 173.
Kew, H. Wallis, *Chernes Cyrneus in Nottinghamshire*, 55.
King's Knot, 33.
Knowledge, 192.
Koenig, Dr. E., *Natural Colour Photography*, 37.

Lancashire Union and Natural History Society, 64.
Lasius niger, Anatomie de la tête, by Charles Janet, 94.
Lambay, Contributions to the Natural History of, County Dublin, 55.
Leaf Folding, by Mrs. Beverley Ussher, 147.
Leeds, Twenty Country Rambles Round, by John Hornby, 146.
Letters to the Editor, 29, 45, 90.
Library, 18, 38, 58, 98, 118, 157, 198, 232.
Library Fund, 2.
Life and Evolution, by F. W. Headley, 53.
Linnæus, Memorial of, 188.
Linville and Kelly, *A Text-book in General Zoology*, 13.
Little Owl, 97.
Liverpool Kyrle Society, Flower Branch, 108.
Lodge, R. B., *Photographs of Bird Life*, 71.
London Birds, Notes on, in 1906, 46.
London Plants, 155.
London Wild Birds, 184.
Lotus Land, by P. A. Thompson, 37.
Lydekker, R., *Sir William Flower*, 15.
Lyonesse, A Handbook for the Isles of Scilly, 55.

Machinery, The Curse of, 27.
Maguire, D.D., LL.A., *Historic Links*, 15.
Malvern Field Club, 2.
Malvern Hills, 3.
Mammals, One Hundred Photographs of some Smaller, by Douglas English, 71.
Mammals, The Life of, by Ernest Ingersoll, 36.
Manchester Microscopical Society Lectures, 171.
Martin, The Fairy, 97.
Martin, Haunts of the Fairy, 46.
Martin, E. A., *Dew Ponds*, 148; Dew Ponds, Paper in *Knowledge*, 192; Letter *re* Purley Beeches, 90.
May Blossom, 177.
Meeting, Annual General, 79, 99, 121.
Meeting, Special General, 79, 97.
Members, New, 17, 38, 58, 76, 97, 118, 138, 157, 178, 198, 217.
Menteath, P. W. Stuart, *Pyrenean Geology*, 148.

Miles, Walker, *Field Path Rambles*, 91.
Miles, Walker, *Picturesque Spots in Surrey*, 191.
Moore, Walter, *Aylesbury and its Surroundings*, 76.
Morale de la Nature, by M. Deshumbert, 148.
Mullens, W. H., *Gilbert White of Selborne*, 226.
Mulso's, John, Letters to Gilbert White, 64.
Mulso's Letters to Gilbert White, edited by Rashleigh Holt White, 66.
Musgrave, Mr. and Mrs., Letters from, 125; Letter to, 124.
Murderous Millinery, 107.
Muzzling of Dogs, 2.
Myles, Mrs. Percy, Illness of, 222.

National Trust, 27.
Naturalist, 211.
Naturalist, The Irish, 192.
Natural History Notes, 3, 29, 46, 65, 96, 114, 137, 149, 172, 193, 211, 223.
Natural History of our Shores, by Joseph Sinel. 56.
Natural History Queries, 7, 31, 51, 66, 138, 156, 177, 196, 216, 226.
Nature, A Year's Work with Mother, by Alyce L. Sandford, 35.
Nature, By-paths in, by Frank Stevens, 36.
Nature's Carol Singers, by Richard Kearton, 9,
Na ure Knowledge Diary, Blackie's, by W. Percival Westell, 35, 94.
Nature Notes, a Few, 153.
Nature Rambles, Fifty-two, by W. Percival Westell, 190.
Nature Reader Monthly, by F. H. Shoosmith, 148, 192, 211.
Nature Study, 27.
Nature Study Course for Women, 65.
Nature Study for Rural Schools, 26.
Nature Study Instruction, 136.
Nature Study Prizes, 38, 118.
Nature Study, School Children and, 6.
Nature's Surgery, 152.
Nest, A Piebald, 196.
News from the Branches, 18, 58, 76, 135, 157.
Notonecta glauca in London, 3.
Northampton with its Surroundings, 229.
North Middlesex Junior Branch, 77.
Nuthatch, Habits of the, 194.

Officers, Election of, 123.
One and All Gardening, 1907, edited by Edward Owen Greening, 38.
Orang, 211.
Orchid, Bee, 156.
Orchids, 177.
Orchid, on the French Riviera, query new? 157.
Orchis or Orchids, 177.
Osprey, Protecting the, 208.
Otters, Protection of Animal Life, 172.
Otter and Salmon, 114,

Palestine, Flowers and Trees of, by Augusta A. Temple, 144.
Pasteur, Life of, by Rene-Vallery-Radot, translated by Mrs. R. L. Devonshire, 15.
Pasture and Meadow Analysis (Rural Study Series), by The Rev. E. Adrian Woodruffe-Peacock, 94.
Paradise, Birds of, 187.
Parasitic Plant growing on Caterpillar, 216.
Peat Moss in Galloway, by L. Copland, 61.
Perennial, What is a? 154, 176.
Pheasants, 6.
Photography, Colour-correct, by T. Thorne Baker, 37.
Photographic Monthly, 95.
Photography, Natural Colour, by Dr. E. Koenig, translated by E. J. Wall, F.R.P.S., 37.
Photography, Pictorial Landscape, by J. C. Warburg, 95.
Photographic Society, Royal, and Colour Photography, 198.
Pines and Moorland, by G. Brodie, 201.
Plant Freaks, 97, 115, 155.
Plant Life, Studies in Garden and School, by Horace F. Jones, 10.
Plover, 212.
Pond Life, 226.
Potatoes, by the Hon. H. A. Stanhope, 95.
Prehistoric Grave, 223.
Price, David, *The Commoner Wild Birds of Great Britain*, 71.
Proceedings of the South London Entomological and Natural History Society, 148.
Protection of Animal Life (Otters), 172.
Protective Measures in Other Lands, 171.
Purley Beeches, 27, 90, 135.
Pyrenean Geology, by P. W. Stuart Menteath, 148.
Pythons, 4, 31, 115, 152, 196.
Pythons and Tigers, 137.
Python's Meals, A, 175.

Rain, 138.
Rain, Black, 116.
Ramble Routes in Middlesex and Herts, by Noah Weston, 192.
Rambles, Fifty-two Nature (Series of Open-air Talks with Young People), by W. Percival Westell, 190.
Raymond, F. L., Sun Spots and the Weather, 181.
Red Deer, A Malformed Antler of a, Recent Geological Discovery at Speeton, 192.
Redstart, 115.
Report, Twenty-first Annual, 126.
Reviews and Exchanges, 9, 34, 52, 66, 91, 109, 142, 171, 188, 208, 226.
Rhead, G. Woolliscroft, *Chats on Costume*, 34.
Robins Killing their Parents, 51, 66.
Roses, by T. W. Sanders, 147.
Roses, Destruction of Wild, 29.
Roses, Tea, 196.
Roses, Wild, 51.
Rules, Revision of, at Special General Meeting, 97.

Sandford, Alyce, L., *A Year's Work with Mother Nature*, 35.
Sanders, T. W., *Roses*, 147.
Scenery, Unlovely, 116, 155, 156.

Scott, M. K. C., and J. A. Henderson, *Birds* (Shown to the Children Series), 36.
Sea, The Opal, by John C. Van Dyke, 17.
Seal in Morecambe Bay, 172.
Selborne Society Notices, 17, 38, 58, 76, 97, 118, 138, 157, 178, 198, 217, 231.
Selborne Society, Suggested Sections of, 141.
Selborniana, 2, 26, 45, 63, 89, 107, 135, 141, 169, 184, 207, 222.
Shark in Sandown Bay, 196.
Shaw, A., *The Site*, 206.
Sheep Dog, A Faithful, 3.
Sheldrakes, 195.
Sheppard, T., *Guide to the Wilberforce Museum, Hull*, 147.
Shoosmith, F. H., *Nature Reader Monthly*, 148.
Shooter's Hill, Eltham Common and Charlton, 136.
Shropshire, A Bit of Old, 32.
Silverlock, Oscar C., The Senses of Ants as regards Heat and Light, 165.
Sinel, Joseph, *Natural History of our Shores*, 56.
Skua's Eggs, Conviction for Taking, 170.
Small Holdings, 28, 65.
Snakes, 226.
Song-Thrush in Hyde Park, 136.
South-Eastern Union of Scientific Societies, 28, 64, 109, 231, 232.
Sparrow, A White, 8.
Sparrow's Behaviour to a Thrush, 31.
Sparrows, Light-coloured, 8.
Sparrows, White, 8.
Sphinx convolvuli, 8.
Spider, 154.
Spring Harbingers and their Associations, by M. G. B., 147.
St. Alban, The City of, its Abbey and its Surroundings, by Charles H. Ashdown, 146.
Stamford, Lord, Accident to, 169.
Stanhope, The Hon. H. A., *Potatoes*, 95.
Stanhope, The Hon. H. A., *Weather*, 192.
Starlings and Caterpillars, 195.
Starlings and the Fruit Crops, 89.
Stevens, Frank, *By-paths in Nature*, 36.
Steward, D., In Sunny Gloucestershire, 85.
Stirling Natural History and Archæological Society, Transactions of, 38.
Stone to Steel; a Handbook Illustrating the Ages of Stone, Bronze and Iron in the Horniman Museum, by H. S. Harrison, 57.
Stone with Curious Markings, 156.
Story of my Heart, The, by Richard Jefferies, 67.
Sunshine in January, 49.
Sun Spots and the Weather, by F. L. Raymond, 181.
Sun, The Log of the, by C. William Beebe, 53.
Surrey, Picturesque Spots in, by Walker Miles. 191.
Sussex, Some Nature Notes from, 193.
Swallow, The Adventures of a Young, 5.
Swallow, White, 196.
Swarming of Ants, 214, 225.
Swiney Lectures, 222.
Swiss Scenery, 187.
Tea Roses, 196.
Temple, Augusta A., *Flowers and Trees of Palestine*, 144.
The Site, by W. A. Shaw, 206.
Thomas, Edward, *The Book of the Open Air*, 91.
Thompson, Ella, *Botany Rambles*, 15.
Thompson, P. A., *Lotus Land*, 37.
Tibble, Edward C., *Goats for Profit*, 37.
Tits, 114.
Tits in Letter-box, 194.
Torquay and its Surroundings, by P. H. W. Almy, 191.
Treasure Trove, Preservation of, 54.
Trees, Extinction of, round Bournemouth, 27.
Trees, Familiar, by Prof. G. S. Boulger, 36.
Trees, Scottish Mountain, 214.
Turle, Mrs., Death of, 222

Unwin, A. Harold, *Future Forest Trees*, 10.
Urban, Charles, *Cinematograph in Science, Education, and Matters of State*, 149.
Ussher, Mrs. Beverley, *Leaf Folding*, 147.
Utility Fowls, by H. Francklin, 57.

Vallery-Radot, *Life of Pasteur*, 15.
Van Dyke, John C., *The Opal Sea*, 17.
Vredenburgh, Edric, *Animal Kingdom*, 17.
Vredenburgh, Edric, *Birds of the World*, 17.
Venus' Comb, 116.
Victims of Lightning, 172.
Vos, George R., *Birds and their Nests and Eggs found in and near great Towns*, 146.

Wade, E. W., *Birds of Bampton Cliffs*, 147.
Warburg, J. C., *Pictorial Landscape Photography*, 95.
Warning, A Salutary, 187.
Wasp, A Plucky, 154.
Wasps, 7, 51, 115, 117, 153.
Water Lilies, 197.
Watson, John, and Blanche Winder, *Woodlanders and Field Folk*, 142.
Watts, F. W., The Brain of the Lower Animals as compared with that of Man, 182.
Weather, Observing and Forcasting the, by D. W. Horner, 208.
Weather, by The Hon. H. A. Stanhope, 192.
Webb, Wilfred Mark, *Principles of Horticulture*, 68.
Westell, W. Percival, *Fifty-two Nature Rambles*, 190.
Westell, W. Percival, *The Nature Knowledge Diary*, 35, 94.
Westell, W. Percival, *The Story of Insect Life*, 208.
Weston, Noah, *New Ramble Routes in Middlesex and Herts*, 192.
What are We? by Leonard Joseph, 95.
Where Birds Nest, 115.
White Ants Beaten at Last, 5.
White, Gilbert, Autograph Letter of, 89.
White, Gilbert, Letter to, from John Mulso, 66.
White, Gilbert, Sale of MSS. of the *Natural History and Antiquities of Selborne*, 141.
White, Gilbert, of Selborne, 226.

White Horse Stone and its Legend, The, F. J. Bennett, 208.
White, Rashleigh Holt, Mulso's Letters to Gilbert White, 66.
Wilberforce Museum, Hull, Guide to the, by T. Sheppard, 147.
Wild Birds of Great Britain, The Commoner, by David T. Price, 71.
Wild Birds Protection Act, 28.
Wild Birds Protection Orders, 186.
Wild Roses, 51.
Wild Fruits of the Countryside, by F. E. Hulme, 189.
Wild Birds, Destruction of, by M. S. Hagen, 29.
Winder, Blanche, and John Watson *Woodlanders and Field Folk*, 142.
Wisbech, The Church of St. Peter Walpole, 45
Wit of the Wild, The, by Ernest Ingersoll, 142.
Witley Common, 27.
Woodlanders and Field Folk, by John Watson and Blanche Winder, 142.
Woodpecker, The Action of a, 7.
Woodruffe-Peacock, The Rev. Adrian, *Pasture and Meadow Analysis*, 94.
Wrens, 152.

Young Citizen, The, 149, 192.

Zoo, At Liberty in the, 149.
Zoology, A Text-book in General, by Henry R. Liville and Henry A. Kelly, 13.

LIST OF ILLUSTRATIONS.

	PAGE
White-Ant-proof Wood	6
A Tit's Nest in a Letter-box ...	6
Female Ring-Ouzel covering Young in Nest during Shower	9
Tree-Pipit Feeding Young Cuckoo whilst Standing on his Shoulders	10
Figure from *Nature's Carol Singers*	10
Daffodil	11
From Lemur to Cicero	13
Tiger-Beetle and Larva	14
Photograph of Jungle Fowl ...	14
Photograph of Egrets	15
St. Bartholomews the Great, Smithfield, and Tomb of Rahere ...	16
Abnormal Daisy	30
Wildershope, Front View	32
Wildershope, Back View	33
Horned Head-dress	34
Walking Dress, 1810	34
Mantle of Ciona intestinalis ...	52
Test of Molgula siphonata ...	52
Gannets Gliding with Wings Outstretched	54
Gannets Gliding with Wings partly Flexed	55
The Sea "Hare," Aplysia punctata	56
The Lump-Sucker, Cyclopterus lumpus	57
An Annotated Diagram of Herb Bennet	68
A Fruit of Ash	69
A Cockchafer (Beetle)	69
Crystal of Beryl on Topaz... ...	70
The "Colenso" Diamond... ...	70
Size of Brilliant into which Colenso Diamond might be Cut	70
Kingfisher	72
Puffins	72
A Harvest Mouse Feeding ...	73
Orkney Meadow Mouse (Vole) ...	73
Larch at Russells, Watford, Struck by Lightning, July 9, 1905 ...	74
Witches' Broom on Hornbeam ...	75
Beech Avenue at the Rookery, near Dorking	92
Friday Street, near Wotton, Surrey	93
Friday Street, Ockley Green, Surrey	93
Friday Street, near Kingsfold, Sussex	94
Friday Street, Warnham, Sussex ...	94
A late Norman Parish Church, Castle Rising, Norfolk	110
Diagram of the Interior Elevation of a Bay of a Church	111
Leaden Font of the Late Norman Period, Walton-on-the-Hill, Surrey	112
Kits Coty House	113
Wild Cats	143
Young Foxes	144
Anemone coronaria	145
Acanthus syriacus	145
Yew Tree at Compton, Berkshire	189
Swallowtail Butterflies	190
Oxted Church	191
Nature's Mirror	209
Dew-Pond in Maiden Castle ...	210
The Remains of a Rock-Shelter at Oldbury Camp	219
De Hirundinibus ab aquis extractis	227
Selborne Parish Registers	227
Fallow Deer	228
Church of the Holy Sepulchre, Northampton	229
Eleanor Cross, Hardingstone ...	230

No. 205. Vol. XVIII. January, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED IN THE ABSENCE OF

G. S. BOULGER, F.L.S., F.G.S.,

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College,

BY

WILFRED MARK WEBB, F.L.S.,

Lecturer on Biology and Nature Study to the Surrey County Council.

CONTENTS.

	PAGE
EDITORIAL	1
SELBORNIANA	2
NATURAL HISTORY NOTES.—*Notonecta glauca* in London.—Ducks.—A Faithful Sheep Dog.—American Gooseberry Mildew.—*Erinus alpinus.*—Pythons.—The Intelligence of a Horse.—White "Ants" Beaten at Last.—The Adventures of a Young Swallow.—Pheasants.—School Children and the Study of Nature.—Giant Trees	3
NATURAL HISTORY QUERIES.—"Birds' Restaurant."—Wasps.—Eagles at St. David's.—"The Action" of a Woodpecker.—Light-coloured Sparrow.—A White Sparrow.—*Sphinx convolvuli*	7
ASTRONOMICAL NOTES FOR JANUARY, 1907	8
REVIEWS AND EXCHANGES	9
SELBORNE SOCIETY NOTICES	17

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C

PRICE 2d.

CASES FOR BINDING
Nature Notes

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

Price 1/1 net, post free.

If the Volumes are sent, Carriage Paid, addressed to
Messrs. BALE, SONS & DANIELSSON, Ltd.,
83-91, Great Titchfield Street, London, W.,
They will be pleased to bind same in Cases on receipt of 1/3 net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

The Selborne Society.

SPECIAL NOTICE.

UNTIL FURTHER NOTICE, OWING TO THE ABSENCE OF **PROFESSOR BOULGER** ABROAD, ALL EDITORIAL COMMUNICATIONS MUST BE ADDRESSED TO:—

WILFRED MARK WEBB, F.L.S.,
Odstock, HANWELL,
LONDON, W.

ALL RIGHTS RESERVED.]

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 205. JANUARY, 1907. VOL. XVIII.

EDITORIAL.

AT the outset of a new year it is only fitting that we should express the hope that everyone of our many readers will find it a most happy one. With the beginning of the eighteenth volume of NATURE NOTES, an opportunity occurs for very briefly discussing the Magazine, and this perhaps may best be done in connection with the aims of the Selborne Society to which it belongs.

It should, however, be pointed out to begin with, that the Editor is, practically speaking, entirely in the hands of his contributors, and moreover, unless he specially invites and, what is much more difficult, secures exactly the material he would like, he can only make a selection from the contributions which reach him in the ordinary way.

No one could with truth deny that a very great deal is done by NATURE NOTES "to promote the study of Natural History," which is now the first object of the Selborne Society. On the other hand, are the questions of the destruction of animals and plants, the wearing of birds' plumage, and the preservation of places of natural beauty or antiquarian interest, quite so much in evidence as they might be? Do the Members of the Society make such matters public through the Magazine to the extent that is possible, or is the help of the Society asked for, in all cases where it would be found useful?

Perhaps the fact that there are special columns devoted to "Natural History Notes" and to "Natural History Queries," while other subjects are dealt with together under "Selborniana" in unsigned paragraphs, may have something to do with the difference. It should be said, however, that if those readers who are interested in the various branches of work which come within our scope would communicate with the Editor, there is no reason why other columns should not be inaugurated.

SELBORNIANA.

LIBRARY FUND.—Mr. and Mrs. George Musgrave have kindly subscribed the sum of one guinea to start a fund for the purchase of a copy of the first edition of "The Natural History of Selborne," and other books for the Library. Further contributions may be sent to the Honorary Librarian or Honorary Secretary, at 20, Hanover Square, London, W.

MALVERN FIELD CLUB.—The winter session of this Club was commenced on November 15, by a lecture on Coleoptera, given by the Rev. H. S. Gorham, F.Z.S., at the Public Library, in the Museum of the Club, this being the first meeting there. Specimens and diagrams were shown, and a clear outline of his subject given by the lecturer.

At 3.15 on December 13, the Severn Drifts were described by Mr. W. Wickham. At 3.30 on January 10, Insect Life will be the topic selected by Mr. Edwards (Victoria Institute, Worcester). On February 7, at 8 p.m., Saurians will be discussed and lantern illustrations shown, by Mr. H. Metcalfe. On March 14, at 3.15 p.m., Plant Fertilisation will be dealt with by Dr. Stanley Haynes, the President of the Club, and on April 11 Mr. Carlton Rea will give an address.

All these meetings will be held at the Public Library, Malvern, where members of the Selborne Society will be welcomed on presentation of their visiting cards to the President or Secretary.

EDUCATIONAL CONGRESS.—A scheme is on foot for holding a general Educational Congress in London each year. It has been formulated by representatives of fourteen of the chief associations of teachers in England and Wales, and at present it is suggested that it should take place in January, beginning in 1908, and extending over a week. The Meetings would be general, for the discussion of topics of interest to all educationalists, and sectional, dealing with specific subjects, while the various societies interested could hold their annual meetings during the same period, and at the same place. We hope that Nature Study and the Teaching of Natural History will receive their fair share of attention. Mr. Herbert B. Garrod, General Secretary of the Teachers' Guild, is acting as Secretary to the Committee.

THE MUZZLING OF DOGS.—On January 1 a new order of the Board of Agriculture and Fisheries comes into force, empowering local authorities to make regulations with regard to the wearing of collars (with the name and address of the owner inscribed upon them) by dogs in highways, and places of public resort. At the same time Article 10 of the Rabies Order of 1897 is revoked, together with previous regulations as to the muzzling of dogs.

MALVERN HILLS.—We have received the welcome news that for the time being, at least, the threatened injury to the Malvern Hills, by a railroad, has been averted.

NATURAL HISTORY NOTES.

448. Notonecta glauca in London.—Although this insect can fly pretty well, I think it hardly probable that the specimens seen by Mr. Johnson (No. 441) at Clapham Junction could have come from Wimbledon Common, even with a favourable wind. Is it not more likely that they came from the River Wandle or from ponds on Clapham Common or Wandsworth Common?

C. NICHOLSON.

449. Ducks.—The decrease of ducks of different kinds during the last ten years is very marked in this locality; and the reason is a puzzle. Mallards, Gadwall, and Teal rarely drop into our decoy. The Gadwall has almost deserted its "home" on Narford Lake, where it was introduced some years ago, and whence it spread over this part of England. Some say that during the breeding season abroad, ducks are more harassed every year. Others think that the increase of our population causes greater persecution than ever. This latter reason is not sufficient to account for the decrease about here. Perhaps the small downfall of rain of late years may have deprived them of many of their haunts. Another reason may be the ever-increasing numbers of rats.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

450. A Faithful Sheep Dog.—Some fresh evidence of our canine friends' intelligence is always coming to light. In a recent issue of *The Rural World* the story of a shepherd's faithful dog is told. One night a North of England shepherd brought in his flocks and hurried to his cottage to have his supper. But he missed the dog which usually followed him of an evening for her own food. The man thought it rather strange, but made no search for the dog that night. When the shepherd went down to the corrals next morning he found the gate open, and his dog standing guard over the sheep. In his haste the night before he had forgotten to close the gate, but the dog had noticed how remiss her master had been and remained at her post throughout the night, though she suffered from the pangs of hunger and thirst.

Canonbury. CHAS. E. J. HANNETT.

451. American Gooseberry Mildew.—The Board of Agriculture and Fisheries have received information that the American Gooseberry Mildew (*Sphærotheca mors-uvæ*) has been discovered in more than one place in England, and as there is reason to believe that the disease, in at least one case, is of some years' standing, they think it desirable to warn all fruit-growers, nurserymen, gardeners, and other growers of gooseberries of the dangers involved. The disease, which is termed American, owing to the extensive damage it has done in America, is of a very serious character, and has rendered the culture of gooseberries unprofitable and practically impossible wherever it has appeared.

The mildew generally becomes visible during the last half of May or the first half of June, when it appears in the form of "glistering frost-like spots" on the fruit on the lower part of the bush, where there is usually dense shade. It then spreads to the leaves and tender shoots. In its earlier stages it has a cobwebby appearance, which soon becomes white and powdery from the development of the light conidial spores. Later in the season the leaves and other parts affected turn a rusty brown. The fungus prevents the berry from growing, and the fruit becomes worthless. All during the summer, therefore, the disease can easily be detected, and the bushes can be dealt with according to the extent of the disease. But during the winter the disease remains dormant and will not spread from plant to plant. During this period, however, it can be conveyed from one district to another in bushes and stocks. It is clear that enormous and irreparable mischief may be done in this way, and it is the duty of all nurserymen to take precautions, not only for their own sake, but for the sake of the locality in which they live.

The Board of Agriculture and Fisheries, therefore, urge all nurserymen and market gardeners who intend to buy bushes or stocks of *Ribes aureum*, whether

from abroad or from Ireland, or even from other growers in Great Britain, to observe the following precautions:—

(1) Only to purchase from those growers or dealers who are prepared to offer a guarantee that the plants they are selling are of their own growing, and that no case of American gooseberry mildew has ever appeared in their gardens or in the immediate neighbourhood, and that the said plants have not been near any gooseberry plants recently brought on to the seller's premises.

(2) To plant such gooseberry bushes or stocks as they may buy or acquire from other premises than their own, in a special part of their nursery or garden, at some distance from other gooseberry bushes.

(3) To destroy all plants found to be affected with the mildew, and to spray with Bordeaux mixture all others suspected of being infested, with the object of destroying any external mycelium or adhering spores that may be present. This should be carried out during the period when the disease is dormant.

(4) To keep a careful watch on all gooseberry plants in the forthcoming spring for any signs of mildew, and to report any appearance suggestive of the disease to the Secretary of the Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W., immediately it is detected.

(5) To assist the Board in discovering any unreported cases of the infestation during the past summer.

There is at present no law dealing with the eradication of the pests of fruit trees in this country, but the Board believe that the American gooseberry mildew has not spread very far as yet, and that it depends very largely on the action of the fruit-growers, nurserymen, and market gardeners, whether its further development can be prevented.

Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W.

452. Erinus alpinus.—This plant grows on lime stone walls of a school near Clitheroe, within a quarter of a mile of the site of a Roman road as marked on the 6-inch ordnance map. As this spot is on the border of Yorkshire and Lancashire, if you read "road" instead of "wall" the passage in "British Flora" referred to by Mr. E. Hodgson (444), will not be far wide of the mark.

Blackburn. A. M. BROADBENT.

453. Pythons.—While I should not care to go quite so far as to say that a full-grown or even exceedingly large python *could* not kill and swallow a tiger, I think there is no difficulty in accounting for the apparent inaccuracies in the quotation given by Mr. Houghton (No. 415). The missionary swears to the correctness of the facts of the incident, and I see nothing impossible in it, except that the animal in question was a tiger. Mr. Daubeny's comments are sufficient to refute *that*, and if we substitute "*leopard*" for "*tiger*," all difficulties vanish. I do not know whether it is customary to call leopards, "tigers," in Ceylon; seeing that jaguars are so called in America, the cases seem parallel.

Hale End, Chingford. C. NICHOLSON.

454. The Intelligence of a Horse.—It is difficult to be convinced that the case in No. 431 can be looked upon as one of equine intelligence. It may be purely accidental. At the risk of being severely hauled over the coals, but by way of hoping to see the matter discussed in NATURE NOTES, let me say that the intelligence of the horse seems to be of a low order, and that in a civilised country like England it has little or no chance of improving. The one thing above all others required in a horse is obedience. A horse that has a will of his own, and is determined to show it, is seriously handicapped. Those horses that give up thinking, that submit to their masters' orders, and carry out his requirements as to beauty, strength and speed, are the most useful and most highly prized, and therefore the most likely to be allowed to live and carry on the race. Under such conditions the brain of any animal must deteriorate. When, however, the horse runs wild, as in Australia, he has to think for himself, and to work out the problems of self-preservation. The change soon shows itself. He becomes as intelligent as the wild creatures among which his lot is cast, but generally at the expense of beauty, and many other qualities valuable to man. Most wild horses are large in the head, and, bodily speaking, inferior to the English animal. The brains of cattle, sheep and the domestic duck have also suffered from subjection to man.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

455. The Intelligence of a Horse.—In reference to No. 431 in last month's NATURE NOTES, I beg leave to say, with all due respect to Mr. R. T. Lewis, that I do not see how the incident he describes can further in the slightest degree the theory of the reasoning power of animals. Why should not the horse have upset the bag because of natural emotional anger, or, possibly, to frighten away any pigeons either inside the bag or near it? Surely, also, it is only natural to suppose that the horse, having got over his anger, would lift up the bag again to continue eating. O. C. SILVERLOCK.

456. White "Ants" Beaten at Last.—Not long ago a process was introduced by Mr. Powell for preserving and seasoning timber by treating it with sugar. This invention must have far-reaching effects owing to the time which it saves and the improvement that is made in the wood. A most interesting, and at the same time important development of the idea, is the addition to the sugar of a poison which successfully deters white "ants" or termites from attacking the treated wood. Any one who is familiar with the ravages of these insects in tropical countries will see at once what this means to those who live where termites abound. Our illustration shows two pieces of wood fastened together, which were placed where termites could attack them, by Mr. H. M. Ridley, of

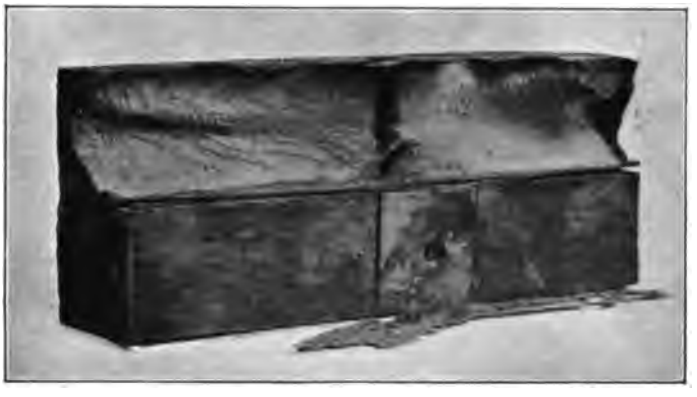


FIGURE 1.

the Botanical Gardens, Singapore. The lower piece, which has been Powellised and specially treated, is untouched, whereas the other piece has been nearly eaten away, and would have entirely disappeared if the experiment had not been brought to a close (see figure 1). W. M. W.

457. The Adventures of a Young Swallow.—When staying with friends near Stafford in September, I found a young swallow about three or four days old, which had apparently fallen out of its nest. It was near the stable yard, and there were several buildings close by which we searched to find its nest, but we saw no sign of any but deserted ones. My friends said I must leave it, as I could not possibly rear it; but thinking that if I left it the cats would be sure to get it, I put it into a basket near the kitchen fire for the night. Next morning I took it out and put it near the place where I had found it; and when I went there quietly an hour later, I saw that it was being fed by quite a number of swallows. I think there must have been a dozen of them; some hovered round while the others went in search of food. This went on for nine days, during which we always took it in at night, and put it out again about six in the morning when the servants came down. We hung the basket up out of the way of the cats. The little bird would perch on the edge of this basket, and when it saw the old ones, would flap its wings and squeak, while they flew by, each one putting a fly into its beak as it passed. I left the place on the ninth day, and my friends wrote to tell me that on the tenth it flew away.

Crynant, Tunbridge Wells. M. C. FOWLER.

458. Pheasants.—In some of the keepers' cottages round here the fire-grates are constructed for burning wood only. The keepers are allowed to cut all the wood they require, and use no coal at all. Pheasants are said to have such a dislike to the smell of coal smoke that they will not remain where coal is used. Friends have frequently told me how they noticed the smell of a coal fire on their return to England after staying in a house in Ireland, where peat was used. Can it be that pheasants discriminate between the smoke of coal and of wood? Here the keepers say that they do.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

459. School Children and the Study of Nature.—Some readers may possibly be glad to know how great an interest is taken by many of our village children in the study of Nature. This has been greatly owing to the help and encouragement given to them by our schoolmaster, Mr. R. C. Turner. Portions of NATURE NOTES (which I lend to him each month) are read aloud to the children during school hours, and discussion is invited. During the summer I receive frequent visits from the children (both boys and girls) with the request

Photograph by R. C. Turner.]

FIGURE 2.—A TIT'S NEST IN A LETTER-BOX.

that I will please "name this plant" for them. We then proceed in the following manner. I write the English and Latin name on a card, and attach it to the specimen in question, adding, perhaps, a few remarks. It is then taken to the school, where Mr. Turner enters it, together with date, place where found, and name of finder, in a special book kept at the school for this purpose. The children are taught not to gather specimens ruthlessly, and to be especially careful with regard to any plant which presumably is a rare one. The boys are, many of them, much interested in the habits of birds. Our pretty school garden abounds in blackbirds' and thrushes' nests, which are unmolested, and often a report is made to Mr. Turner of the discovery of some specially interesting nest in the hedgerows; the secret of its whereabouts being carefully guarded from any companion not considered wholly trustworthy in such matters. One day I was taken to see a robin's nest in a little-frequented lane-way, and to my great delight I found scraps of bread and butter placed round it by the boys, as a contribution to the family larder. Mr. Turner has taken a remarkably good photograph of a tit's nest (Figure 2), which was constructed inside a letter-box, the hen bird sitting and hatching her family, in spite of the dropping in of letters, and daily clearing of the box.

Ropley, Hants. MARIE S. HAGEN.

460. Giant Trees.—Three miles to the south of Windermere Lake, and close to Cartmel Priory, there is still to be seen the shattered frame of a once mighty yew. This tree, until a few months ago, was one of the local treasures, for it was probably the oldest living thing in the Vale of Cartmel. There is much difference of opinion as to its age. It was in a decaying condition, and had undoubtedly been so for very many years. These trees are also stated to remain at full maturity without growing or decaying for some hundreds of years. The original stem rotted away, but fresh roots grew down from above, through the crumbling base, and the trunk eventually came to consist of a number of hard woody strands. The tree probably continued to grow for five hundred years, and the total age is reputed to be at least 1,000 years. This yew is mentioned in the Doomsday Book. It leans considerably to the north, is 40 feet high, and the trunk measures 14 feet in circumference. This grand old tree was utterly unprotected and suffered greatly from visitors, who cut away portions as mementoes. One night, about eighteen months ago, the tree was purposely destroyed by fire. Straw and brushwood had been placed around the stem, and the fire did its work only too well. Much local indignation was felt at this useless destruction. The author of this vandalism has never been discovered.

Other famous yews still exist in the Lake District, the most notable, of course, being those in Borrowdale, that secluded valley which lies below Glaramara, Scafell, and other peaks of over 2,500 feet, a spot said to be blessed with 200 inches of rain in the year.

A short time ago I discovered another tree of interest. This one stands in a hollow on the hill above Windermere Ferry, and is unknown to most people. It is a chestnut of tremendous proportions, by far the largest that I have ever seen. The trunk is its most noticeable feature.

Grange-over-Sands, Lancashire. R. C. LOWTHER.

NATURAL HISTORY QUERIES.

106. "Birds' Restaurant."—Will the writer of the article under above heading, kindly say where the "clever little wire baskets" for holding hemp seed can be got, and so oblige a numerous colony of "tom tits"?

107. Wasps.—On the 6th of this month—a warm sunny day—I found a wasp on my window. Thinking it would be better outside, I took up a thick pair of kid gloves, and tried to sweep it gently out with them. This evidently enraged it greatly, and it stung the glove. The sting was so deeply embedded that it could not withdraw it again, and stuck fast in the glove. I had some difficulty in getting it off, and after several attempts managed it with the aid of the other glove, but to my dismay I found that the tip of the body had come off with the sting, and the wasp was crawling about with some difficulty. I should like to have put it out of its misery, but it fell out of reach. I then looked at the glove, and there was the sting still firmly fixed in and still working vigorously, though quite two minutes had elapsed since it left the wasp. It was a large sting, and so strong and horny in substance that it required some pulling to extract it.

Query.—Do wasps often lose their stings like this, and was the wasp likely to live without it, and minus the top of its body?

Capel Cottage, Haslemere. E. A. BEDFORD.

ANSWERS.

108. Eagles at St. Davids.—I was much interested to read the note in the November number with reference to the above (Query No. 98). When at St. Davids as a child many years ago, I remember climbing one of the rocky Tors, and seeing a large bird fly up near us, which my father believed to be an eagle. On my next visit, my children came in one day, saying that they had seen "a great brown bird" fly up from the carcase of a sheep, which was lying on the hill side. C. S.

109. "The Action" of a Woodpecker.—In reply to Query No. 103, allow me to say that the food of green woodpeckers consists largely, if not entirely, of ants, and that when in search of these creatures on my lawn and in

other places, their "high, stiff, not to say, ungainly hops," of which Mr. Millard speaks, have frequently arrested my attention. Their movements on the ground make one imagine that they have no joints to their legs, or that they are in splints. These birds are evidently going through a process of evolution. Their food is mainly procured on the ground; and, owing to their feeble powers of flight, must always be sought in the vicinity of trees, to which they hurry on the approach of danger. If attacked by a hawk they try to evade it by dodging round the tree trunk, using their powerful legs, rather than their wings, in so doing. It is probable that in future ages the power of woodpecker's wings will be increased, and that the legs and feet will be more adapted to progression on the ground than they are at present.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

110. **Light-coloured Sparrow.**—In the November number of NATURE NOTES (Query No. 99) there is mention of a "light-coloured sparrow." About ten days later we saw one here, quite answering to the description given in the note, and feeding with the other birds, sparrows, starlings and blackbirds, but very firmly "holding its own" if they attempted to take away the bit of food it was in possession of. It was here for a week or ten days, then disappeared, but has returned the last few days. I wonder can it be the same bird seen by the writer of Note 99?

Worthing.

111. **A White Sparrow.**—In the month of August last, I saw on Hampstead Heath a white sparrow on the ground close to me, amongst a number of other sparrows of the normal colour. This is the only albino bird that I have as yet been fortunate enough to observe myself, although I have occasionally read or heard of them. I mention the above as I believe that albinos are uncommon amongst birds, and it may be of interest to some of the readers of NATURE NOTES.

J. M. Voss.

112. **White Sparrows.**—It may interest the writer of Query No. 99 to hear that in Bowness last summer there were three pure white sparrows. They stayed there all the summer, and mixed with their dusky neighbours as if they were unaware of their own peculiarities. O. C. SILVERLOCK.

113. **Sphinx convolvuli.**—In reply to Mr. Daubeny, I will try to summarise the principal features in the sixty-three pages devoted to this moth in "Tutt's British Lepidoptera" (now appearing), vol. iv. The moth is found practically throughout the Old World, from sea-level to great elevations. Its home is in the tropics, where it is possibly continuously brooded, hibernating (if it can be so called) as a pupa. It is a confirmed migrant, and reaches in its wanderings the confines of the polar regions. It is not known to occur in the New World. In subtropical countries it is probably double or triple brooded: in temperate regions probably single brooded only, and existing by regular migrations, not being able to pass the winter in any stage. The immigrant moths appear in this country from June to August according to season, their descendants being found from June to October flying at dusk at the flowers of many plants, particularly Tobacco plants, Petunias, Honeysuckle, and Pelargoniums. The bluish-green eggs are laid on almost any species of *Convolvulus* (wild or cultivated) and *Ipomæa* and many other plants, on which the larvæ feed for about seven weeks. They are very variable in colour during growth, each moult usually marking a change, but they are mostly some shade of brown when full grown, although green ones sometimes occur. They bury themselves in the soil and form cells in which they become pupæ. C. NICHOLSON.

ASTRONOMICAL NOTES FOR JANUARY, 1907.

Venus will be a beautifully brilliant object before sunrise, and may be observed near the moon on January 11.

Mars will also appear as a morning star. *Jupiter* will be strikingly visible during the whole night. Near moon on January 26.

Saturn will be an evening star setting soon after the sun. Near moon on January 17. W. F. D.

REVIEWS AND EXCHANGES.

Nature's Carol Singers. By Richard Kearton. 5 inches × 7¾ inches, 251 pages, numerous illustrations. Cassell and Co. Price 6s. net.

In welcoming Mr. Kearton's latest book, we may explain that "Nature's Carol Singers," for the present purpose, are five and forty more or less familiar British birds, and that charming descriptions are given of their habits and manners. It goes without saying that there are many fine photographic illustrations both of the songsters and their nests; while, in addition, there is given to each chapter a pretty head piece, which is usually a flower, and a tail piece, showing some delightful country view. Here and there we notice the name of

FIGURE 3.—FEMALE RING OUZEL COVERING YOUNG IN NEST DURING A SHOWER OF RAIN.
(From "Nature's Carol Singers," by the courtesy of Messrs. Cassell and Co.)

Gilbert White, but the book really consists of Mr. Kearton's own observations, and lucky will be the boy or girl who receives a copy of it as a present. We may take this opportunity of alluding to the vagaries of the modern block maker, or the individual who is responsible for what we believe is known as their "setting." While congratulating those concerned on the efforts which break the formal lines bounding many pictures, and which are particularly successful in "Nature's Carol Singers," we cannot too strongly condemn the taste which allows anyone to decorate some of Mr. Kearton's masterpieces with frames which seem in a way to combine the characters of a tombstone and cheap wall paper.

Future Forest Trees. By A. Harold Unwin. 8¾ inches × 5½ inches, 108 pages. T. Fisher Unwin. Price 7s. 6d. net.

At the present time, when a new interest has been aroused in the subject of forestry, the appearance of this little volume is most appropriate, and it should prove very useful to those who contemplate planting in this country, as it gives concise accounts of the experiments which have been made (in Germany, Austria, Great Britain and Switzerland) with American trees, as well as details of their characteristics and the treatment which they need.

FIGURE 4.—TREE PIPIT FEEDING YOUNG CUCKOO WHILST STANDING ON HIS SHOULDERS.
(From "Nature's Carol Singers," by the courtesy of Messrs. Cassell and Co.)

FIGURE 5.
(From "Nature's Carol Singers," by the courtesy of Messrs. Cassell and Co.)

Plant Life, Studies in Garden and School. By Horace F. Jones, 5 inches × 7¾ inches, 260 pages, 320 illustrations. Methuen and Co. Price 2s. 6d.

The merits of this book are numerous, even if those who are familiar with Nature Study in this country will not find anything particularly striking or new in the material used or the methods adopted. One may mention the value attached to continued observations, and the use of the school garden for Nature Study, and to provide a collection of *living* specimens, which are always available, instead of merely making it a convenient out-door workshop for manual instruction in Horticulture. Again, there is the frank admission that the open-air study of creatures in their native habitats is the best, and the endeavour to do

all that is possible under school conditions, which at present usually prevent the attainment of the ideal. The illustrations are avowedly unpretentious, but they are very much to the point (see figure 6).

FIGURE 6.—DAFFODIL.

(1) Bulb before planting; (2, 3) early stages of growth; (4, 5) later stages of growth, showing positions adopted by the young flower bud; (6) a flower which has just emerged from its sheath; (*Sh*, *p*) division of the perianth; (*c*) the large corona; (7) flowers fully open and showing the slightly drooping position adopted.

(From "Plant Life, Studies in Garden and School," by the courtesy of Messrs. Methuen and Co.)

If, as has been maintained, the child at the outset of Nature Study should "face existence whole," we may well ask why "Studies in School and Garden" should be confined to plants.

The Faery Year. By G. A. Dewar. 6 inches × 8¾ inches, 317 pages, 8 illustrations. Alston Rivers. Price 7s. 6d.

Mr. Dewar is a word painter and at times he almost takes our breath away, as, for instance, in these lines from his preface in which he sums up an English Year.

"It is truly a faery procession that appeals to us when we review even a few of the things which make up the year of Nature, a wonderful charm of birds, butterflies, stars, clouds, woods, and waters. At random I recall a few now; first, at the acme of the year, days of great June with its clouds of endless forms and phantasies, wisp, stipple and fleece of cirrus and cirro-stratus, snow mountains of cumulus; July with sorceries of silence and the scented breath of its eve, with its strange dance of ghost moths at dusk, when Capella is flashing intensely out of the afterglow and the gold taper of Mars is alight in the awful blue. August knee-deep in the copse grasses, with yellow-hammer days. Autumn with its golden-haired larches. Winter with a wine-coloured withy wood by the estuary, and the ghost-like earth-cloud stratus, creeping over the darkening marsh or heath; and at the same seasons the whirling columns of winter gnats and the glittering gossamer weighted with rainbow dewdrops. Then there is the faery year of our English birds, spiral evolution of linnets in the frosty skies, loop of the rooks going home to rest, a flock of starlings in autumn black-budding the ash tree a field away, swan angel white clipt out on the leaden lake, thrushes singing like mad in the grey stormy March dawn.

"Year after year, the beauty and wonder repeated, but year after year, countless sights and sounds noticed for the first time in our lives; this is the experience of everybody who attends to Nature. It is this incessant press of new things which makes the study of Nature at times something of a despair, so much to see, such a little time to see it!"

Nevertheless he writes of things he evidently loves and knows, and about which he holds opinions which are all the more valuable because they are not always those which are current among naturalists. Those interested in Nature Study, as well as those who like good writing, will appreciate the book, and everyone should take to heart the concluding words of the preface which we print in italic type.

It is very valuable to recognise to our utmost capacity the beauty and wonder of Nature. This is far from being a matter of mere "sentiment," it is of high practical importance, for the right enjoyment and study of these things must make men and women happier, completer in understanding and taste and eye, and therefore better members of the State.

The subject matter is very varied. On the third page we find the heading "Selborne and White," under which Mr. Dewar says that physically Selborne can hardly have changed since White's day, though he fears that it is rather different with the village. Later on we meet with a host of interesting subjects from the "oxeye's vocabulary" to a "poacher in petticoats," and the "fritillary's flirtation," to the "cat as a mesmeriser."

A Picture Book of Evolution. Part I. containing Lessons from Astronomy, Geology, Zoology. By Denis Hird. 5¼ inches × 8¼ inches, 200 pages, 182 figures. Watts and Co. Price 2s. 6d. net.

In the introduction of this little volume we are asked to bear distinctly in mind that it is intended for those who have not read any statement of the doctrines of evolution. It is, in fact, "a first book for young people, and those who have not much time to read." We may say that it seems admirably suited to its purpose, and that the illustrations taken from many celebrated sources are quite numerous enough to warrant its title. The simple instances of evolution among ordinary things are very much to the point, and it will surprise some to learn that a rifle and a piano have a common ancestor. The brief accounts of Astronomy and Geology pave the way to Zoology and the evolution of man. In the letterpress the fact that man has not developed from any existing species of animals is brought out, but the monkeys shown in the interesting figure at the end of the book, entitled "from Lemur to Cicero," might, perhaps, give that impression. They are the types that most nearly approach the stages through which man has passed (see figure 7).

We look forward to the appearance of the second volume.

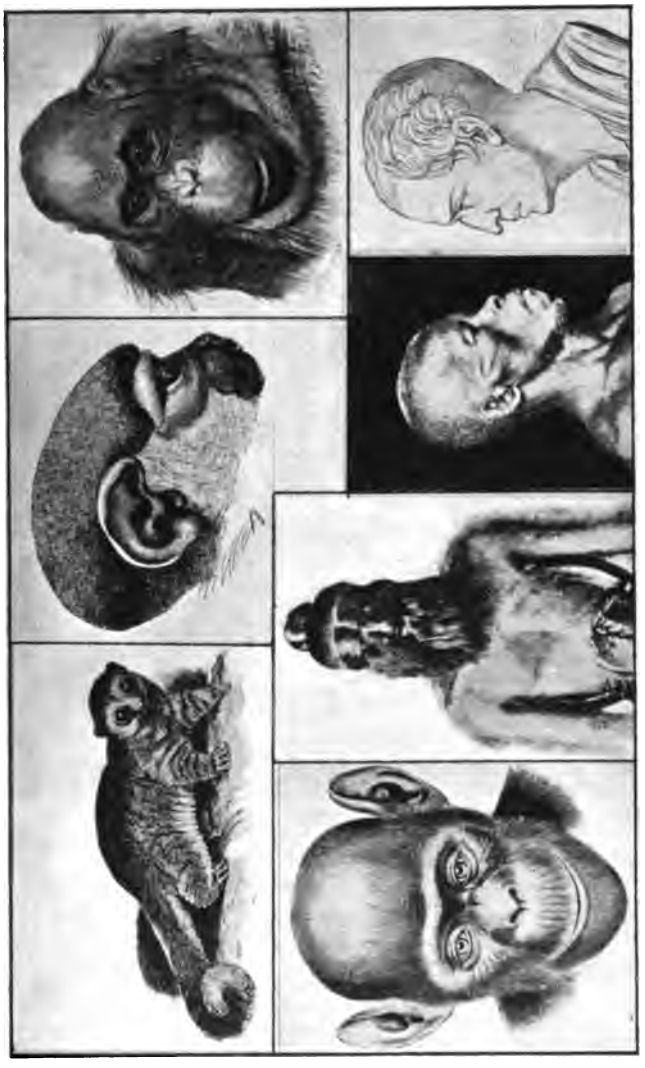


FIGURE 7.—FROM LEMUR TO CICERO.
(From "A Picture Book of Evolution," by the courtesy of Messrs. Watts and Co.)

A Text-Book in General Zoology. By Henry R. Linville and Henry A. Kelly. 5½ inches × 8 inches, 451 pages and 233 illustrations. Ginn and Co. Price 7s. 6d.

When looking through an American book on natural history, which is illustrated, it is interesting to notice how many species of animals closely resemble those of our own country. There are other surprises to be met with. For instance, it is generally supposed that all insects are called bugs on the other side of the Atlantic, but occasionally their popular names are more correct than

ours. While we know the cockchafer as a May bug, in America it is the "May beetle," while the lady-bird on the other side of the water becomes the "lady beetle." The book under consideration forms an excellent introduction to zoology. It is very pleasantly written, while the illustrations, of which many are new, are exceedingly good. The method of arrangement differs from that which is usual in text books. As a rule, these either begin with the lowest forms of life, on the assumption that one should proceed from the simple to the complex, or start with highest animals, judging it best to argue from the known to the unknown. Drs. Linville and Kelly use the insects as a starting point and then descend to the Protozoa at the bottom of the scale; afterwards the reader is taken from the fishes up to man.

Each important division of the Animal Kingdom is illustrated by the description of a type, and in accordance with the modern trend of Zoology the relationships of the creature to its surroundings are rightly considered. A general

FIGURE 8.—TIGER-BEETLE AND LARVA. (From "A Text-Book in General Zoology," by the courtesy of Messrs. Ginn and Co.)

FIGURE 9.—PHOTOGRAPH OF JUNGLE FOWL. (The ancestor of the Barndoor Fowl) (From "A Text-Book in General Zoology," by the courtesy of Messrs. Ginn and Co.)

discussion of the allies of the type usually follows. The earthworm affords an opportunity for discussing Physiology, while there is a chapter on the doctrine of evolution and another dealing with the origin of the Invertebrates and the ancestry of the Vertebrates. Under the heading of birds their economic importance is considered, and although it is recognised in America that certain injurious birds should be exterminated, it is there that the most sweeping acts of legislation in favour of birds have been passed. An interesting account is given in the book under review of the steps taken in Bird Protection. The last chapter treats of the historical development of Zoology, and Selbornians will be interested in the following extract: "One of the earliest writers in the field which we have termed Zoology or Biology, was the English Clergyman, Gilbert White (1720 to 1793), the Author of *The Natural History and Antiquities of Selborne*. The authors still use the term Vermes to include the segmented worms, the flukes, thread worms, and wheel animalcules, which most modern Zoologists place in separate groups, in fact these, together with the sea-mats, and lamp-shells, which many years ago were separated from them, are described under the heading of "Allies of the Earth-worms." It should, however, be said that the authors own

that they have little basis for grouping all these forms together, and the strongest indication of relationship that they can produce is the great similarity in the free swimming larvæ. The illustrations are excellent (see figures 8, 9, 10).

George Bentham (English Men of Science Series). By B. Daydon Jackson. 5 inches × 7½ inches, 292 pages, frontispiece. J. M. Dent and Co. Price 2s. 6d. net.

Sir William Flower (English Men of Science Series). By R. Lydekker. 5 inches × 7½ inches, 190 pages, frontispiece. J. M. Dent and Co. Price 2s. 6d. net.

The Life of Pasteur. By René Vallery-Radot. Translated from the French by Mrs. R. L. Devonshire. 6 inches × 9½ inches, 484 pages. Archibald Constable and Co. Popular Edition. Price 7s. 6d. net.

FIGURE 10.—PHOTOGRAPH OF EGRETS.
(From "A Text-Book in General Zoology," by the courtesy of Messrs. Ginn and Co.)

In these books we have the life stories of three scientific men of the first rank. A zoologist and anthropologist in Sir William Flower, to whose efforts we owe the modern museum; a botanist in George Bentham, whose name is familiar to every student of the British flora, and in Louis Pasteur, a pioneer of the newest science—bacteriology—whose work for the direct benefit of humanity in connection with the prevention of hydrophobia will be remembered long after that dread disease becomes unknown. We hope that our readers will gain as much pleasure from these books as we have done.

Botany Rambles. By Ella Thompson. 7½ inches × 5 inches. Horace Marshall and Son. Three Parts. Price: Spring, 7d.; Summer and Autumn, 1s. each. We are pleased to see that these useful little books have now run into a second edition.

Historic Links. Topographical Aids to the Reading of History. By D. L. Maguire, LL.A. 5 inches × 7½ inches, 308 pages, 16 illustrations. Swan, Sonnenschein and Co.

The sub-title of this book will give an idea of its intention, and to show that it will appeal strongly to our readers it is only necessary to say that Roman

Britain is represented by St. Albans; Saxon England by Repton Priory; while the Tower of London, St. John's Gate, Clerkenwell, and the Church of St. Bartholomew the Great (see figure 11), form the subject matter of Part III., which

FIGURE 11.—ST. BARTHOLOMEW THE GREAT, SMITHFIELD, AND TOMB OF RAHERE.
(From "Historic Links," by the courtesy of Messrs. Swan, Sonnenschein and Co.)

deals with Norman England. Then we are taken to the Universities, to the Guildhalls, to Crosby Hall, and Winfield Manor, The Charterhouse, Hampton Court, and Westminster Hall. Such a book as this makes one feel that History should not be studied in the class-room, but under the shadow of those interesting monuments which, though only too few, are still preserved to us.

The Opal Sea. By John C. Van Dyke. 5¼ inches × 7⅜ inches, 262 pages, frontispiece. T. Werner Laurie. Price 6s. net.

There are many for whom the sea has an infinite charm, and they will be glad to read Mr. Van Dyke's book, for in it practically every aspect of, and point of interest regarding the ocean is touched upon. To support our statement we quote from the multitudinous side-headings which are printed on the wide margins of the pages. "Sea Under Cloud Light," "Height of Storm Waves," "Dover Cliff," "Algæ of the Greater Depths," "Swiftness of the Porpoises," "The Flight of the Petrel." The author is not always up to date, for in dealing with the pearly nautilus he repeats the stories of the ancients with regard to this creature. He has yet to learn that it is the argonaut which comes up to the surface, while the true nautilus never does this while it is alive.

Birds of the World, described by Edric Vredenburgh. 8¼ inches × 9¼ inches.
British Birds and their Eggs. 9¼ inches × 13 inches.
Animal Kingdom. Described by Edric Vredenburgh. 9¼ inches × 8¼ inches. Raphael Tuck and Sons, Ltd.

These children's books, and especially the one on "British Birds and their Eggs," should prove very useful as presents to small children who are interested in Natural History. We have also received a number of packets of coloured post-cards published by Messrs. Raphael Tuck and Sons. Of these the British butterflies should be mentioned as being particularly good, though it would be an improvement if the names were given on the same side of the card as that on which the figures appear. The British Birds and their Eggs are from the same originals as the illustrations of the book above mentioned. The other series, entitled "In the Woods," "British Sea Birds," and "In the Jungle," are not quite so successful from a Natural History point of view, but they have the advantage of being labelled on the right side.

Kelway's Manual of Horticulture. Fifty-fifth Edition. 384 pages, numerous illustrations and several coloured plates.

This volume is one of those catalogues for which English nurserymen are celebrated. It gives an excellent idea, by means of its pictures, of the best kinds of flowers and vegetables which are now on the market.

Received: *The Animals' Friend*, *The Animal World*, *Bird Lore*, *The Estates Magazine*, *Health Resort*, *The Naturalist*, *The Irish Naturalist*, *The Victorian Naturalist*, *The Plant World*, and *Museum Gazette* for December.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Notice to Members.—A circular has been issued by certain members of the Hampstead Branch which is unauthorised either by that Branch or by the Society. It is requested that all members of the Selborne Society to whom it has been sent, but who have not received the letter signed by the Chairman of Council on behalf of the Society with regard to it, will communicate at once with the Secretary of the Selborne Society.

New Members.—*Central Society.*—The following members were elected at the last Council Meeting: A. G. Pickford, Esq.; the Rev. Canon Morley Stevenson; Hedley V. Webb, Esq., A.C.P. The following stand for election: H. Barter, Esq.; Miss Mary A. F. Tench; James A. Waddell, Esq.

Birmingham Branch.—W. S. Mann, Esq.

Ealing Branch.—Paul Shuffrey, Esq.

New Junior Branches.—Warrants have been signed empowering the Rev. Canon Morley Stevenson to form a Junior Branch at Warrington Training College, and Mr. A. G. Pickford to inaugurate one at Hulme Grammar School, Oldham.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: J. H. Bowman, Esq., £1 1s.; Frederick Crowley, Esq., £1 1s.; David Morphew, Esq., £1 1s.; Andrew Pears, Esq., £1 1s.; William Whitwell, Esq., £1 1s.; Mrs. Eden, 10s. 6d.; Dr. Johnston Macfie, 10s. 6d.; G. S. F. Manton, Esq., 10s. 6d.; Mrs. Minet, 10s. 6d.; Miss Beeching, 10s.; W. Warde Fowler, Esq., 10s.; Thomas Layton, Esq., 10s.; R. M. B. Otter-Barry, Esq., 10s.; J. Rawlins, Esq., 10s.; the Rev. E. F. Russell, 10s.; M. J. Teesdale, Esq., 10s.; Miss Alice R. Francis, 7s. 6d.; R. Boucher James, Esq., 7s. 6d.; Francis L. Berry, Esq., 6s.; Charles H. Crawley, Esq., 6s. The Committee of the Ealing Branch has pleasure in acknowledging a subscription of greater value than 5s. from M. W. Hervey, Esq., 10s.

Library.—*Regulations with regard to the borrowing of books from the Society's Library.* Any member of the Society is entitled to borrow one book at a time, and to retain it for one month.

On payment of postage both ways members may receive their books by post, but letters can only be dealt with on the days when the Honorary Librarian attends at 20, Hanover Square.

The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of January 14 and February 18 for the purpose of issuing books to members.

The Honorary Librarian has pleasure in acknowledging the following additions to the Library: "A Naturalist's Calendar, with Observations in various Branches of Natural History," by Gilbert White, 1795; "Natural History of Selborne," Jardine's Edition, 1836; "Natural History of Selborne," Jardine and Jesse's Edition, 1851—purchased by the Society. "Natural History of Selborne," World's Classics Edition, 1904—kindly presented by William Whitaker, Esq., F.R.S.

NEWS FROM THE BRANCHES.

Birmingham and Midland Branch.—On Thursday, December 6, an interesting and instructive lecture was given at "Westbourne," Edgbaston, by Mr. John Humphreys, F.L.S., entitled "Flowers and Insects." The lecture, which was illustrated by lantern slides, dealt chiefly with the fertilisation of flowers in various ways, viz., by the action of the wind, and by the visits of bees, butterflies, moths, &c. Mr. T. H. Russell, F.L.S., took the Chair, and at the close a hearty vote of thanks was accorded to the lecturer.

EXCURSIONS.

Saturday, November 17.—A visit was paid on this afternoon to the private collection of nests and eggs formed by Mr. Robert H. Read, M.B.O.U., at Bedford Park, W. The specimens were laid out conveniently for inspection, and after a general view Mr. Read explained some of their more interesting features. He remarked that eggs generally bore a protective resemblance to their surroundings, and pointed out how the eggs of the Thrush and Crow families, and of many birds which build in hedges or bushes, are of a greenish tint, whilst those of the Terns, Plovers and other eggs laid on the bare shingle, resemble in a remarkable degree the pebbles surrounding them. The eggs of Tits, Woodpeckers and other birds deposited in holes or covered nests, are white or nearly white, no protective coloration being required. There is, however, a wonderful variation in the coloration of many species, notably the Guillemot, among large birds, and the Tree Pipit among small ones. Mr. Read exhibited olive green, white, buff and red eggs of the Common Whitethroat, the Blackcap and the Sedgewarbler, and many other variations. Amongst the Cuckoo eggs were spotless blue eggs, and in nests of Redstart and Hedge Sparrow, two purple-red eggs of Cuckoo in a nest of a Tree Pipit with eggs of a similar colour, and a Cuckoo's egg in a nest of pure white eggs of Robin. He called attention to a tray of abnormal and pigmy eggs of the Common Fowl, and remarked that there were similar variations in the eggs of wild birds, especially game birds, and pointed out pigmy eggs of Guillemot, Buzzard, Kite, Owl, Pheasant and Grouse, down to tiny eggs of the Willow Warbler, Chiffchaff and Blue Tit. In contrast to the tray of eggs of Stone Curlew and Oyster Catcher on the bare shingle, were

eggs of various species of ducks cosily lying in their nests of down. This down, plucked from the breasts of the female, felts together in the breeding season so that flakes cannot be blown away by the wind. In the winter season, however, it entirely loses its felting or clinging properties, and the least puff of air will scatter it in every direction. The reason for this has engaged Mr. Read's attention for a long time, and he has photo-micrographs of the down of various species taken at different times of the year, and other material still under observation, which will throw some light on this matter.

Mr. Read, who has collected in various countries in Europe, pointed out that the nests of Meadow Pipit and Reed-bunting from Norway always contain six and sometimes seven eggs, whilst five is the usual maximum in this country. Nests of the Robin and Hedge Sparrow from Sweden, where they are scarce woodland birds, contain seven and six eggs, whilst six and five are the usual full sets in this country. A fine nest of the Honey Buzzard which he found in Sweden was made almost entirely of green twigs and leaves of the oak and black poplar. This partiality for something green in the nest was shared by other large birds of prey. Nests of the Rough-legged Buzzard from Norway and the Common Buzzard from Scotland contained small tufts of wood-rush (*Luzula sylvatica*), whilst two nests of the Booted Eagle from Spain contained green pine-needles and a spray of white poplar respectively. From the nest of a Black Kite in Spain he took a cuff from a blue shirt and other "lesser linen," a large chip of wood and two match boxes with humorous Spanish pictures on them.

He pointed out a set of eggs of the Great Tit from Spain, which were far more handsomely marked than any he had found in England. He had found eggs of the Little Ringed Plover in Sweden and Spain, and observed it in Denmark, where it also bred, yet in England, which lay almost midway between Scandinavia and Spain, it was an exceedingly rare straggler and had never been known to breed.

At the end of the demonstration Mr. and Mrs. Read kindly invited the Selbornians to tea, after which a hearty vote of thanks was passed to them on the proposition of Mr. Wilfred Mark Webb, F.L.S., seconded by Mr. Hugh Boyd Watt, M.B.O.U.

Saturday, December 8.—By the kind invitation of Mr. C. M. Mühlberg, a very pleasant afternoon was spent by some sixty members of the Selborne Society and their friends in inspectiug a fur and skin warehouse, and in listening to an interesting account of its contents. On their arrival the visitors were conducted over the five floors of the warehouse, where the various skins had been laid out in their raw, dressed and dyed states, and afterwards Mr. Mühlberg gave a demonstration, which he illustrated with examples of the skins of the fur-bearing animals of commerce, which were passed round and much admired.

For this purpose the skins were divided into eleven classes as follows :—

THE SKINS OF FUR-BEARING ANIMALS OF COMMERCE.

Classification according to Similarity of Furs.

(1) Seals .. Fur Seals—human habits, Pelagic Seals, process of dressing and dyeing, Hair Seals, Whitecoats, Saddlers, &c.
(2) Otters .. Sea Otters, River Otters.
Beavers.
Nutrias .. (Family Octodontidæ.)
Mink .. Amphibious.
Platypus (Ornithorhynchus)
Musquash Black, Brown, and Russian Silver Musquash.
(3) Martens.. Sables, Baum, Stone, and Japanese, Kolinsky.
Fisher .. Largest of Martens –finest tail.
Skunk .. or Black Marten. Civet Cat.
Fitch .. or Polecat.
Hares .. Rabbits, Marmots, Hamsters.
(4) Foxes .. White, Red, Grey Blue, Silver Foxes and real Black Foxes, dyed Foxes.
(5) Coinchillas.
Ermines.. Royal Robes: (*a*) as head of State; (*b*) as Head of Church, Miniver.
Squirrels.. and Squirrel Linings.
Moles.
(6) Lambs .. Persian, Astrachan, Broadtail, Grey Crimean, White Lambs, Moufflons.
(7) Lynx, Leopards, Lions, Tigers, Cats, Wild, House, Genet.
(8) Bears, Wolverines, Raccoons, Wolves, Jackals, Ponies.
(9) Australian Animals: Oppossums, Grey, Black. Kangaroos, Wallabies, Wombats.
(10) Japanese Animals: Tanuki, &c.
(11) Chinese Animals: Thibets, Kids.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Monday, February 18.—Publications Committee at 5.30 p.m.

Monday, March 18.—Publications Committee at 5.30 p.m.

Tuesday, March 26.—Council Meeting at 5.30 p.m.

EXCURSIONS.

Saturday, February 16.—British Museum, Bloomsbury. Assemble in the Entrance Hall at 2.15 p.m. Mr. Reginald A. Smith has kindly consented to give a demonstration on "Palæolithic Man."

Saturday, February 23.—Streatham Parish Church (St. Leonard's) and the small private Antiquarian, Geological and Conchological collections at "Limatburg," 34, Ambleside Avenue, Streatham, by the kind invitation of Mrs. Meibé and Miss Willson. *Members only; those wishing to attend must apply to the Excursions Secretary for tickets before February 20, enclosing stamped addressed envelope.* Assemble at the Church at 3.15 p.m. The church lies between Streatham and Streatham Hill Stations and is close to the electric tramway terminus. Trains from London Bridge, Ludgate Hill and Victoria; tramcars from Westminster, Waterloo and Blackfriars Bridges.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee*, at 16, Heathcote Street, W.C.

ANSWER TO CORRESPONDENT.

C. J. Maurice.—Remains of several extinct species of monkeys are known from the late Tertiary deposits. The bones of *Pithecanthropus erectus* from the Pliocene of Java are now considered to be human, but they approach more nearly to the great apes than do any living races of mankind. Palæolithic man is also known from several now celebrated skulls. The predynastic (prehistoric) Egyptians had reached a high state of civilisation by about 6000 B.C.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES, books for review, specimens for naming, &c., should be addressed to the Acting Editor, WILFRED MARK WEBB, F.L.S., Odstock, Hanwell, London, W.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

A SUPPLEMENT TO THE

'BIRDS OF NEW ZEALAND.'

By the late SIR WALTER L. BULLER, K.C.M.G., F.R.S.

Vol. I. of the "Supplement" embraces 250 pages of Imperial quarto, and contains, besides a steel-engraved frontispiece, five hand-coloured plates and forty text illustrations.

Vol. II. contains seven hand-coloured plates (making twelve in all), with numerous text illustrations.

The price to subscribers is Three Guineas per volume; and the edition is limited to 500 copies.

A Prospectus may be obtained on application to

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.

☛ **Athenæum** says:—"This excellent and well-known periodical . . . The articles are all from the pens of authors eminent in their own lines."

PLAINLY WORDED.

KNOWLEDGE & ILLUSTRATED SCIENTIFIC NEWS.

EXACTLY DESCRIBED.

MONTHLY, SIXPENCE NET.

SUBSCRIPTIONS—Yearly 7/6, Half-yearly 4/-. Special for 5 Years, £1 5s.

(All Post Free to any part of the World.)

Contains **up-to-date** articles by the **ABLEST EXPONENTS** in the

VARIOUS BRANCHES OF NATURAL HISTORY & SCIENCE,

Profusely illustrated with full-page Plates, Photo Blocks, and Drawings.

Publishing Office:—27, CHANCERY LANE, LONDON.

OR THROUGH ANY BOOKSELLER.

CHEAP EDITION. In demy 8vo, handsomely printed and bound, price **5s.**

Proverb Lore.

A Manual dealing with the History, Literature, Associations and Significance of Proverbs in all Countries and Climes. By F. EDWARD HULME, F.O.S., F.S.A., Author of "Mythland," "Wayside Sketches," "Natural History Lore and Legends."

"A remarkably interesting study."—*Sunday Sun.*

"Mr. Hulme's book is the work of an enthusiast, and of a well-informed enthusiast, and none can dip into his pages without annexing something—amusing or instructive."—*Glasgow Herald.*

In large 8vo, tastefully printed and appropriately bound, price **10s. 6d.** net.

A New and Exhaustive Work on Haddon Hall.

HADDON: The Manor, The Hall, Its Lords and Traditions.

By G. LE BLANC SMITH.

"An accumulation of facts interesting to all who have visited this famous and romantic old home."—*Tribune.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

IN A FEW DAYS. 8vo, price 6/6 net.

ANIMAL ARTISANS,

And other Studies of Birds and Beasts,

BY THE LATE

C. J. CORNISH, M.A., F.Z.S.

With a Prefatory Memoir by his Widow, 2 Portraits of the Author from Photographs, and 12 Drawings by PATTEN WILSON.

LONGMANS, GREEN & CO.,

39, PATERNOSTER ROW, LONDON, E.C.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

WILFRED MARK WEBB, F.L.S.,

(Acting Editor of "NATURE NOTES").

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides) to Schools and Natural History Societies, on Zoology, Botany, or Nature Study.

For Terms and Dates, address WILFRED MARK WEBB, Odstock, Hanwell, London, W.

No. 206. Vol. XVIII. February, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED IN THE ABSENCE OF

G. S. BOULGER, F.L.S., F.G.S.,

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College,

BY

WILFRED MARK WEBB, F.L.S.,

Lecturer on Biology and Nature Study to the Surrey County Council.

CONTENTS.

	PAGE
BIRD LIFE IN THE VICINITY IN THE SOUTH-EAST LONDON. By Ernest Edgar Howe	21
SELBORNIANA	26
LETTER TO THE EDITOR.—Destruction of Wild Roses	29
NATURAL HISTORY NOTES.—A Bittern.—Bird Striking a Tree.—Alien Plants.—Freak of a Common Daisy (*Illustrated*).—Sparrow's behaviour to a Thrush.—Pythons.—Blackcaps	29
NATURAL HISTORY QUERIES.—"Birds' Restaurant"	31
ARCHÆOLOGICAL NOTES.—A Bit of Old Shropshire (*Illustrated*).—King's Knot...	32
ASTRONOMICAL NOTES FOR FEBRUARY, 1907	33
REVIEWS AND EXCHANGES	34
SELBORNE SOCIETY NOTICES	38

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

CASES FOR BINDING
Nature Notes

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

Price 1/1 net, post free.

If the Volumes are sent, Carriage Paid, addressed to
Messrs. BALE, SONS & DANIELSSON, Ltd.,
83-91, Great Titchfield Street, London, W.,
They will be pleased to bind same in Cases on receipt of 1/3 net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

The Selborne Society.

NOTICE.

Members of the Ealing Branch of the Selborne Society are accorded the privilege of attending the lectures of the Ealing Scientific and Microscopical Society which are held in the Public Buildings, Ealing, on Saturday evenings, at 8 p.m. Below is a list of fixtures for the coming session, 1907 :—

Saturday, February 9.—"Weather Forecasting," by William Marriott, Esq., F.R.Met.S.

Saturday, February 23.—"A Naturalist's Trip to the African Lakes," by W. A. Cunnington, Esq., B.A., Ph.D.

Saturday, March 9.—"Some Newly Discovered Monuments from Western Asia and Egypt," by Joseph Offord, Esq.

Saturday, March 23.—"The North-West Passage," by H. A. V. Ransom, Esq., M.A.

Saturday, April 13.—"The Defence of Sea Coasts from Erosion," by A. E. Carey, Esq., M.I.C.E., F.R.G.S.

Saturday, April 27.—Annual Meeting. A display of Lantern Slides will be given.

The Honorary General Secretary will be glad to hear of editions of Gilbert White's "Natural History of Selborne" which may be for sale.

ALL RIGHTS RESERVED.]

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 206. FEBRUARY, 1907. Vol. XVIII.

BIRD-LIFE IN THE VICINITY OF SOUTH-EAST LONDON.

HAVING lived in this part of London for the last ten years and more, during which time I have kept an accurate record of the various species of birds that I have come across, I venture to give a list of some, together with a few notes, which may be of interest to bird-lovers in our great city.

Taking the district of Eltham and its close proximity, extending towards Plumstead and the low-lying country round about, my observations for this article extend no further than Belvedere Park, not more than 1¾ miles from Bostal Heath, which latter place is well known to the public of this part of the Metropolis.

During the course of a year one may observe many varieties of our larger birds passing over from time to time, such as Herons, Wild Geese, Curlews, &c., but the seventy-seven birds enumerated range from the "golden crowned Wren" to the Wood-pigeon; so that I do not touch any of the larger varieties, but confine myself to the smaller species; and I feel quite certain that the majority of people have no idea of the great variety of summer migrants that breed regularly with us each year, at no great distance from our homes.

The first summer visitor who makes himself known near London is the Chiff-chaff, and he is with us before March is gone; yet a little later the Wryneck keeps him company, together with our charming little warbler, the Willow-Wren. Perhaps the Wood-Wren may be near, but the pleasing little song of the Willow-Wren must appeal to many who enjoy the presence of spring, even though the Chiff-chaff may be plaintively chirping his name at the same time.

You may perhaps be listening to a Skylark singing, and he may appear an ordinary bird to you, yet he is a new arrival here;

glance on the owner, who watched me from behind his counter. Needless to say, I very soon discovered my mistake, and the old dealer, when I turned towards him, met my wondering gaze with a look of smiling satisfaction which I interpreted wrongly at the moment. He removed a pair of large horn spectacles and remarked solemnly: "You have got the proper inner eye, you know a bird when you see it."

"I should say rather I am incapable of recognising an imitation when I see it," I answered airily; but the look I once more fastened on the little blue birds routed the depreciating words, and I sat down in full view of the narrow dusty shelf, where the feast of fat or cocoanut seemed to diminish visibly under the silent workings of those needle-sharp beaks.

"Well, what do you think of them?" asked the owner of the shop.

"They are wonderful," I replied, "I have never seen any thing so life-like. Are they for sale?"

"Sale? No!" the old man answered emphatically as he re-adjusted his immense round spectacles, which certainly bestowed very proper "outer eyes" on him. "Though I don't say I never mean to part with them," he added. "That all depends."

"And on what does it depend?" I enquired with my eyes upon the shelf; but before he could answer I had sprung to my feet and darted across to the Blue Tits, over-turning in my haste an old spinning-wheel, which fell with clatter enough to have scared a whole flight of birds. These two, however, remained motionless, and after once more gazing long and closely at the pair I returned to my seat, feeling thoroughly ashamed of myself, more especially when I stumbled over something lying in the way and found that it was a broken distaff and a bunch of tangled flax.

To my words of apology on discovering the extent of the damage done the round-eyed old owner of the shop paid not the smallest attention. He leaned towards me over the counter and asked in a wheezy anxious whisper: "What made you jump up and cry out like that?"

"Did I cry out?" I asked. "Well, to tell you the truth, the smallest of the two birds seemed to me to move suddenly, and I am convinced it moved," I added with heat. "Have you never noticed the same thing?"

Instead of replying to my question, the old dealer pulled himself up by the counter and shuffled across the little shop to the shelf. He was very stift in the joints and unwieldy, but with the greatest care and gentleness he lifted first one little Blue Tit and then the other from its perch on the shelf, and set them down side by side in front of me on the counter. Then with many grunts and groans he sank heavily into his capacious round leather chair, and began to talk.

"I am close on eighty years," he explained, "and I got

molested; and, though perhaps strictly a local bird, under favourable circumstances it might be induced to nest regularly even in some of our parks. Just off Bostall Woods, and in the surrounding undergrowth, this bird rears its young every year; and, thanks to its cunning in selecting a spot, is often able to avoid the grimy hand of the obnoxious small boy, who collects *all* birds' eggs, great or small, usually taking the whole clutch from a nest.

Perhaps your walk may take you around the low-lying marshland of these parts, amongst the sloe and other bushes. You observe a little brown bird flitting in and out of the bushes and reeds: that is the Sedge Warbler probably, or it might be the Reed Warbler, for they are very much alike. When it is evening, if you throw a clod into the bushes where the Sedge Warbler may be, he will retaliate with a song, which, if a little bit jerky, is no mere apology, and he may continue this particular song well into the night. He is the Nightingale of the marshes.

A rare bird, the Pied Flycatcher (if you can distinguish him), is sometimes seen, not being quite so rare here as is supposed. A songster perhaps of no great account, he is but withal a bird greatly to be encouraged. As for his near relation, the Spotted Flycatcher, he is quite a common bird here in the summer. You may see many specimens from Bostal to Belvedere on the high roads, this being at times a feeding-ground for many.

Most people have seen a grasshopper, but how many have seen a Grasshopper Warbler within walking distance of their London home? Yet this bird is no stranger here sometimes. You can hear him in the undergrowth, his peculiarity being the imitation of the insect of the fields. This bird, like many other birds of passage, is very shy, and, unless one is careful, is very easily frightened away.

A bird usually seen in great numbers in this country, and perhaps one of the commonest of migrants in this part, is the Common Whitethroat, which should not be confused with the Lesser Whitethroat, a bird not often occurring here. With but an indifferent song, he is nevertheless an interesting little fellow and breeds almost anywhere.

The Wren is, perhaps, well known to everybody: the Golden-crowned Wren is not, though you may see it sometimes among the tall fir trees at Bostal. Its appearance is erratic, for sometimes it leaves us for months together. It nests here, but being such a tiny bird it is difficult to discover.

The Dartford Warbler, an extremely rare bird here, is another species fast becoming extinct, and, like the Savi's Warbler, will, I am afraid, be no more, unless steps are taken to severely protect it. Examples occur sometimes, and I have known them to nest quite near; but their eggs are sought after so relentlessly by the "professional egger," that I wonder they survive at all. Having only a weak song they probably escape observation, but they stay the year round with us and are truly British birds.

The Meadow Pipit is a common bird, especially to be seen on the marshland, and no doubt is better known in the summer than in winter, for we get additional numbers in the spring, and their sweet song and peculiar action whilst singing would probably attract anybody's attention.

The Common Bunting is not numerously met with : one or two will nest in the fields here, but not often. It is, to my mind, a *real country bird*. The eggs are smeared with signs similar to shorthand, a peculiar feature of all Buntings' eggs.

Alongside the field, where you may have looked for the Common Bunting, and not far away from the Sedge Warbler, you may find the nest of the Black-headed Bunting; but still, this species is not often met with, and as for the Cirl Bunting, he is a great rarity, though I have come across his nest and eggs just outside our limits. The members of the last-mentioned species are, like most Buntings, very beautiful birds.

The familiar Swallow family is well represented around London. We have the Swallow and House Martin, and near by, where there is a sandbank or cliff, you come across the little Sand Martin. All these birds should be *severely* protected, as should also the Swift, of similar habits, but belonging to a different family, for they rank amongst the migrants who are partial to our city.

That peculiar wide-mouthed bird, the Night-jar, is often heard here in the quiet of a summer's evening. I have found its beautiful mottled eggs so near as Bostal Heath. It is a very attractive bird, but I am afraid not very well known, though the peculiar note which it emits may be familiar to many.

The Red-backed Shrike, that butcher amongst birds, may be frequently met with here. Should you see him perched on a slender tree singing, look round, and if you come across a hawthorn bush, or any bush having thorns, look out for his larder : you will, perhaps, meet with it, and perhaps it is as extensive as it is varied. All sorts of flies, beetles, &c., you will see impaled on thorns, some dead, some still wriggling and being slowly cooked by the heat of the sun : even young hedge-sparrows, turned out by the cuckoos, are welcome additions.

The Butcher-bird is a bold, fearless fellow, but not a *great* songster, and certain seasons find him a common bird in these parts.

The best known, and perhaps the most popular of all our birds of passage, is probably the Cuckoo. As a harbinger of spring, together with its peculiar habit of placing its eggs in other birds' nests, it is well known to everybody. Just out of the smoke of town it is a common bird and not so interesting as *some* of its colleagues, though without it spring and early summer would not be half so charming.

As the Fieldfares and Redwings leave our shores on the approach of spring, with many other winter visitors, such as the Siskin, Black Redstart, Mealy Redpole, Lesser Redpole and

Mountain Linnet (all of which I have discovered here, excepting the Black Redstart), so do great quantities of Larks, Blackbirds, Thrushes, Missel-Thrushes and Starlings migrate from north to south.

The observation of winter migrants is quite as interesting as that of summer. Many of the winter birds mentioned above are extremely rare in this country; but I have known the Mealy Redpole to remain and to nest quite locally, instead of choosing a different country.

The Song Thrush, Robin, Hedge-Sparrow, Blackbird we are all familiar with, but the Golden Oriole, Hoopoe, Crossbill and Grosbeak have occurred here, though, excepting the Crossbill, they are as rare as the others are common. As for the Grosbeak, many specimens of this bird have I seen in the stillness of the pine woods of Bostal Heath, but not lately.

The Kingfisher? Yes, you may see him darting up one of the many large brooks outside our boundary; but usually a man with a gun wants him for a glass case in his parlour, and so frequently an old muzzle-loader lays him low, which is one of the principal reasons why Kingfishers are getting so rare.

It is time that this beautiful "flash of blue" was better protected. I do not know which bird is persecuted the most, the Jay or the Kingfisher, but to see one of these birds flash up stream, and to watch him fish is worth a walk of miles: but we are going too far into the country now. The Jay has increased in numbers here. In the winter time you may count a dozen, under favourable circumstances, in as many minutes.

Turtle Doves occur here sometimes, and you may see them with the Stock and Ring-Dove. Unfortunately they are another group made to suffer; for, during the whole time they are here, they are continually being slaughtered. The useless killing of these birds, so near London, during the breeding season should be stopped. The Ring-Dove is familiar with us in the parks.

Whilst taking a walk in the pine woods you may happen on a squirrel: if so, look for one of the Woodpeckers. You may see the handsome Nuthatch, and perhaps hear his call: you may also disturb the Tree-Creeper, who is trying to keep the tree between you and himself, or you may see the bird descending a tree, tail first; for they are not very particular in their methods of locomotion. If you hear a tap, tap, tap, then you know it is a Woodpecker. It may be the Green Woodpecker, or perhaps the Great Spotted or Lesser Spotted variety.

I have only met the Green Woodpecker on three occasions within our bounds, though the other species may frequently be seen.

One of our handsome birds, and one more often seen lately than hitherto, is the Goldfinch. You may hear this bird singing in its wild state. It is a pretty bird, sings sweetly, makes a beautiful nest, and lays a neat-looking egg; and I consider it is the most attractive of all British birds on all points, for

though the Kingfisher may be gaudy, what a nest he makes, and how you can smell it! Decayed fish-bones and disgorged pellets—puh!

The Bullfinch also, either piping amongst the outskirts of our woods here, or amongst the pines, is not at all an uncommon visitor.

If you want to hear the Chaffinches sing, go you into the pine woods early one spring morning, and you will be rewarded by hearing them everywhere. They are gay little chaps, and good-looking into the bargain. They frequently sing here in the seclusion of the pines in mid-winter.

We will conclude with our rare and powerful finch, the Hawfinch. He inhabits the orchards and woods here, and breeds with us, though once considered rare in this country. I have seen many here. Hawfinches have no song. They use their bill in splitting the kernels of cherries, &c., which they do quite easily, and create great damage in an orchard, but they are magnificent birds.

Finally, when you are out of the smoke and grime of our city and see perhaps a good-looking Sparrow, it may be a different species from our black, begrimed House-Sparrow—probably the Tree-Sparrow; but they are not over numerous. Tree-Sparrows may be confused with the ordinary Sparrow, but the difference is *very* great, the Tree-Sparrow being a much handsomer bird, and having quite a musical note in the spring.

So in a year perhaps, by careful observation, you may come across all the species named in my short article; but many of the birds enumerated have only been seen by myself once or twice during the whole of ten years' careful observation, and perhaps may never come to these parts again. The total number seen of these smaller birds is seventy-seven, thirty-three of which may be considered true migrants to our shores, and others amongst them, besides, may have been migratory birds; but our list goes to show how extensive bird-life is in this country, and quite near London.

ERNEST EDGAR HOWE.

SELBORNIANA.

NATURE STUDY FOR RURAL SCHOOLS.—In the report of the Departmental Committee appointed by the Board of Agriculture and Fisheries, to enquire into the subject of small holdings in great Britain, it is recommended that in all rural and semi-rural elementary schools, Nature study and manual work (both based on rural needs) should after the "three R's" be made compulsory subjects of the curriculum, and that the system of school gardens should be encouraged as much as possible and on practical lines.

NATURE STUDY.—A special sub-committee to deal with Rural Education has been appointed by the County Councils Association, and this body has drawn up a circular which has been sent to seventeen counties, with a view to their exhibiting Nature Study work at the Royal Agricultural Show at Lincoln next June. An endeavour is also being made to arrange Nature Study Exhibitions in connection with other important Agricultural Shows. The suggestions as to exhibits have been published at length in the *School Government Chronicle* for December 29. They are very full and very good; the only objection to be taken is that meteorological records made with the aid of purchased instruments are included under the heading of Nature Study. There still seems to be a tendency, as mentioned in the review of Mr. Westell's "Nature Knowledge Diary," to confound Nature Study with Elementary Science teaching.

WITLEY COMMON.—Lord Carrington, who has received petitions both for and against the enclosure of a portion of Witley Common as a burial ground, has felt bound to hold a local enquiry in which both sides of the question can be heard. Sir Robert Hunter, in commenting on the matter in the *Spectator*, hopes that commons in the neighbourhood of London will not be sacrificed to the passing whim of the ratepayers of a particular parish, but will be preserved intact for the public at large and for posterity.

EXTINCTION OF TREES ROUND BOURNEMOUTH.—The *Morning Leader* calls attention to the way in which the pine trees round Bournemouth are being cut down to make room for shops and small villa residences. The laying out of roads has also caused the uprooting of other trees, though the Town Council and private owners are making praiseworthy efforts to repair the loss by planting young firs, wherever possible.

PURLEY BEECHES.—Another appeal has had to be made for funds for the purchase of Purley Beeches. It appears that three hundred and fifty pounds are still required if the Beeches are to be preserved as an open space. Subscriptions should be sent to the Honorary Secretary of the Croydon Branch of the Selborne Society, Mr. E. A. Martin, F.G.S., of 58, Whitworth Road, South Norwood, S.E.

THE NATIONAL TRUST.—A Bill is to be promoted next session for the incorporation of the National Trust for places of Historic Interest or Natural Beauty. Of the Council it is suggested that various bodies should appoint members, and the Selborne Society would nominate one.

THE CURSE OF MACHINERY.—We commend to our readers an article by Mr. Reginald Newton Weeks, in the January number of the *Nineteenth Century*, on the effect that machinery has in desecrating natural beauty and in thinning the numbers of our agricultural population.

SMALL HOLDINGS.—In the quarterly journal issued by the British Institute of Social Service, which is entitled *Progress*. (we wonder how many magazines there are with this name), there is an article by Mr. R. Winfrey, M.P., entitled, "A Plea for Small Holdings." There is also a number of other articles on social questions and a bibliography of recent books and magazine articles of a similar character.

THE WILD BIRDS' PROTECTION ACT.—A man of Cardiff has been fined five shillings for catching a goldfinch with bird-lime. The *Western Mail*, though praising the action of the Llandaff Bench, thinks, as no doubt our readers will, that the fine was much too light, for a day's captures would realise that sum four times over.

TREASURE TROVE.—The Committee appointed by the South Eastern Union of Scientific Societies some time ago, with a view to preserving Treasure Trove and other Relics from destruction is now actively pursuing its object. It has prepared a notice for circulation generally which is also intended for exhibition in schools in the South Eastern District. The notice gives important information to the finders of relics, including the name of a local referee from whom advice can be obtained. The Committee would be glad to hear from any members of the Selborne Society willing to act as referees and a pamphlet has been compiled for the use of the latter. The Members of the Committee are: Dr. William Martin, M.A., Mr. F. W. Rudler, I.S.O., with Mr. H. Norman Gray, P.A.S.I. (334, Commercial Road, London, E.), as Honorary Secretary. The work is carried on with the help of a special fund and contributions are invited.

THE SOUTH EASTERN UNION OF SCIENTIFIC SOCIETIES.—The Annual Congress of the South Eastern Union of Scientific Societies will be held at Woolwich in June, 1907. From the energy with which the local Antiquarian Society, Borough Council, and Polytechnic are taking up the matter, it seems likely that the Congress, though not held among such rural surroundings as usual, will be exceptionally interesting, and the proximity of Woolwich to London should ensure a record attendance. Professor Sylvanus Thompson, F.R.S., is the President-elect, and it is specially fitting that the Congress over which he is to preside should be held in an important centre of engineering and industrial work. Members of the Selborne Society and other affiliated bodies pay 2s. 6d. for membership of the Congress, while other visitors are admitted for a subscription of 3s. 6d. Surveys of the Geology, Archæology, Botany, and Zoology of Woolwich and of the neighbourhood will be presented, and a temporary Congress Museum arranged. Enquiries should be addressed to Mr. B. C. Polkinghorne, B.Sc., F.C.S., Old Town Hall, Woolwich.

LETTER TO THE EDITOR.

Destruction of Wild Roses.

The other day I was driving through Selborne, and just after passing the entrance to the lane specially mentioned by Gilbert White, I saw in the distance two men laden with what appeared to be bundles of faggots. I mentally put them down as woodmen, and thought how they added a touch of picturesqueness to the scene. On their nearer approach, however, I saw to my disgust that they were carrying not faggots but large bundles of briar-roses which they had rooted up wholesale out of the hedges. I have long been pained by the knowledge that this sort of destruction is carried on during the autumn and winter in country districts, but surely it is doubly distressing that in Gilbert White's own village the hedges should be robbed of one of their greatest charms by these marauders. As the roses are grubbed up *by the roots*, the mischief done in each case is irreparable. Can nothing be done to stop it?

Ropley, Hants. Marie S. Hagen.

NATURAL HISTORY NOTES.

461. A Bittern.—It may interest the readers of Nature Notes to know that I twice put up a Bittern on an isolated pond in the neighbourhood of Godalming. I was able to approach within a few feet of it before it flew away.

On the same pond was a large company of tufted ducks; also I noticed several hooded crows, which I believe to be rather rare so far south as this.

Godalming. Marjorie Lee.

462. Bird Striking a Tree.—Whilst covert-shooting last week, a cock pheasant, far in advance of the beaters, when flying out of the covert, struck and broke his wing against the trunk of a large tree, knocking out a bunch of feathers and falling to the ground. The trees are not planted closely, and the foliage is deciduous. I mention the circumstance because my friends and I remarked upon the extreme rarity of the occurrence.

Shrawley, January 14, 1907. C.

463. Alien Plants.—Adjoining Grangemouth Docks, on the Firth of Forth, on a piece of waste ground on which ballast is habitually discharged from vessels, the following plants were, in the course of a few years, found by the late Colonel Stirling and Mr. Robert Kidston: *Sisymbrium pannonicum, Saponaria vaccaria, Potentilla Norwegica, Achillea nobilis, Beta vulgaris, Medicago falcata, Erigeron Canadense, Linaria repens, Rumex maritimus, Epilobium roseum, Reseda lutea, Senebiera didyma, Polycarpon tetraphyllum, Medicago maculata, Xanthium spinosum, Linaria Elatina, Neslia paniculata, Nasturtium sylvestre, Sisymbrium Sophia, Erisymum cheiranthoides, Lepidium ruderale, Stellaria aquatica, Silene gallica* var. *anglica, Linum usitatissimum, Medicago sativa, Trifolium maritimum, Carum Carui, Artemisia campestris, Crepis biennis, Mercurialis annua, Alopecurus agrestis, Polypogon monspeliensis;* truly a strange assemblage of plants. A number of these are foreign species, and all are alien to the local flora as properly understood. Grangemouth is much frequented by ships from Norwegian, Baltic, German, and Dutch ports.

In studying the geology of the seashore also, one has to be on one's guard as to the influence of the ballast heap. The pebbles of the beach are, as a rule, derived either from the adjoining rocks *in situ*, or from the boulder clays or gravel beds of adjacent drift deposits. Sometimes a series of pebbles may be found whose origin is a puzzle, flints on a granite coast many hundred miles from the nearest chalk-bed, or *vice versâ*, or sometimes stones which have no counterpart in

doing so. There is, in this parish, one fine tulip tree, but no more. We all know the peculiar shape of its leaves; Mr. Ruskin, I seem to remember, finds fault with them because, instead of ending like most leaves in a single point, they have a re-entering angle.

Now I have once at least found these leaves along a road to reach which they must have travelled down a garden, across a small park, and also across a meadow, at the further side of which they must, I think, have cleared its northern hedge, dropping in the road on the further side, where I saw them. Measuring the distance on a 25-in. scale map, I reckon it full 700 yards; there is a slight, but very gradual, descent. These leaves, I take it, must have been torn from the highest part of the tree, and not merely swept up from the ground like those of January 23, for they must have cleared many other trees in the garden, park and meadow.

But the leaves on this windy January day were interesting for a different reason; the effect of a few hours action of the wind upon them seemed to me so much like that produced in the sea on shells, sand and shingle in the course of many long years. The points of resemblance were many. Where the wind rushed forward between the roadside hedges there was a picture of a strong tide-flow through a narrow channel between rocks. When I noticed some bits of roadside swept nearly bare and others banked with leaves, there was the same resemblance to the action of the sea-currents. Eddies, backwaters, and whirlpools were all represented. When I saw how the wind was driving through openings in the hedge, sweeping a small space clear and heaping up the leaves to right and left, there was a picture of a stream from the land breaking through a sand-bank and forming spits or ridges on either side. I came to a point where two roads met, with the wind blowing (though not with equal directness) down both of them. The hedge corner at the point of the junction headed about S.W., and here was a projecting promontory of dead leaves several yards long. This might be compared to the growing shingle point of Dungeness, or, still better, to the shell beach at the north end of the island of Herm, piled up by the tides sweeping northward on the two sides of the island. The road along which the wind came most directly was almost bare of leaves up to the point of meeting; along the other there was a succession of bays and headlands, all modelled, so to say, in dead leaves.

The analogy is a very obvious one, but it seems to me to have a good deal of truth in it, and perhaps it may be thought not quite without interest.

Otham Parsonage, Maidstone. F. W. MILLARD.

478. Notes on the Ealing Bird Sanctuary.—Apart from the birds themselves, of which some twenty species nest in or around the wood, there are many other interesting matters to be met with. Although the flower-hawkers have left us but three plants of the primrose, which we treasure and do our best to preserve, there are in the spring multitudes of bluebells, and of recent years we have succeeded in preventing the greater number of these from being picked. As the roots of the pretty wood-anemone are not so easily disposed of as those of primroses there are patches also of these to be met with here and there. We have also been lucky enough to find one or two orchids, and the banks of meadow sweet in the summer are, like the willow-herbs, a sight to behold. With the exception of a few elms on the outskirts all the large trees are oaks, yet the undergrowth is so varied that it is a never ending source of interest. In fact, the whole place is a veritable paradise for the Nature student. More than one dormouse's nest has been found. We picked up the skeleton of a weasel, and a stoat which had been disturbed was seen to come back and attempt to carry away some young rabbits from the small burrow which their mother had made for their reception. Then there are quite a number of grass snakes, and it is a very curious sight to see one of these swim across the pond, though some of them are not game to do this and prefer to hide in the mud. Insect life is very varied; numerous moths were attracted by "sugar" in the summer evenings and several species of green grasshoppers really belonging to the locust family also made their appearance. It is hoped in time that a complete flora and fauna of the wood may be written, and there seems no doubt but that the results will be well worth the trouble.

WILFRED MARK WEBB.

465. Sparrows' Behaviour to a Thrush.—Noticing a commotion amongst the sparrows in my back garden, I saw that they were flying at a little dirty grey thing on the wall as if it was an owl or bird of prey. On looking at it through my opera glasses I saw that it was a young thrush with the yellow beak of a quite young or half-grown bird. It opened this widely at the sparrows when they came too near. I had to leave the house before watching the end of the affair, and do not know whether the mother came to fetch it or some of the many cats got at it.

Kensington. H. E. LITCHFIELD.

466. Pythons.—In support of Mr. C. Nicholson's note, No. 453, I may say that although it is well known that tigers (*Felis tigris*) do not inhabit South Africa, it is not at all unusual to read in the newspapers of these colonies accounts of the damage done to sheep by tigers, and of hunts organised for the destruction of the wild beasts in question. I have no personal acquaintance with Ceylon, but I know very well that the creature commonly called a tiger in South Africa is the Cape Leopard, a much smaller animal than the true tiger, though equally ferocious and destructive, and as well able to climb trees as the majority of the cat tribe.

An artist in England commissioned to illustrate an article for some magazine, "On a Tiger Hunt in Cape Colony," would, without special knowledge, be almost sure to depict the striped animal which he knows by that name, and would unwittingly mislead the reader by so doing. R. T. LEWIS.

467. Pythons.—The more the question of pythons attacking and swallowing large and dangerous animals like tigers is considered the more impossible it appears. Owing to the long and delicate backbone a snake is easily disabled. A blow from a tiger's paw would cripple the largest and most powerful python, while its claws would cause fatal lacerations. In killing an ox, a tiger inflicts a bite in the neck which crushes the bones at the base of the skull, causing almost instant death. The bones of a snake, however huge, are far smaller and more easily crushed than those of an ox. From the fact of three or four feet of a large snake having been found in a tiger's stomach, we may conclude that tigers are not so averse to attacking snakes as is generally supposed.

When referring to the snake story of "Three in a Tree," Mr. Nicholson, in No. 453, says, "If we substitute Leopard for tiger all difficulties vanish." Do they? There still remain these—the size of a leopard—the power of its paw; its terrible claws that cut like razors to the bone; and its formidable teeth.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

468. Black Caps.—A large space in this garden is enclosed with wire netting to save the fruit from birds. No birds are so determined to enter it as black caps, which alone are successful; though the smaller kinds of tits could get through the mesh if they persevered. A pair of black caps with their young managed this summer to squeeze in and out of the netting, and were very unkind to my raspberries.

Southacre, Swaffham. EDMUND THOS. DAUBENY.

NATURAL HISTORY QUERIES.

ANSWERS.

114. Birds' Restaurant.—In answer to your correspond in NATURE NOTES (Query No. 106), the little baskets for holding hemp-seed for the tits can be very quickly and easily made. Take a piece of the stiff white millinery canvas of about the size of half a sheet of writing paper and join the ends so that it forms a cylinder. Then draw up the bottom to make it into a bag, run a ring of white cotton covered wire (also used in millinery) into the hem at the top, to keep the bag or basket wide open, and add a handle of the same wire by which to suspend it. C. G. WOOD.

115. Birds' Restaurant.—A convenient method of feeding tits is to make one or more wooden discs about two inches in diameter. A piece of string with a knot at the end, passed through a hole in the centre, serves to support and

REVIEWS AND EXCHANGES.

British Tunicata. An Unfinished Monograph. Vol. II. by the late Joshua Alder, and the late Albany Hancock, edited by John Hopkinson. $5\frac{3}{4}$ inches × 9 inches. XXVIII. + 164 pp. with 30 plates (the majority in colour) and 61 figures in the text. Ray Society. Price 25s. net.

In this volume, issued to the subscribers to the Ray Society for 1906, a consideration of the genera *Ciona* and *Corella* completes the account of the "sea squirts" belonging to the family Ascidiadæ. The species of three other families together referable to ten genera are also enumerated and described. That Mr. Hopkinson's position as editor has been no sinecure is shown by the hundreds of references which he has added to the synonymy and the many records and

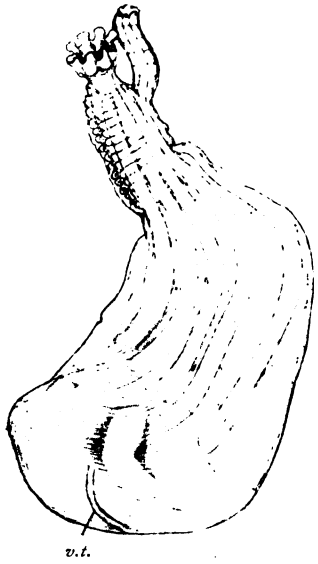


FIGURE 17.—MANTLE OF *Ciona intestinalis*. Nat. size. *v.t.*, Blood vessel leading to the test.

FIGURE 18.—TEST OF *Molgula siphonata*. $1\frac{1}{2}$ nat. size.

(From "British Tunicata," by the courtesy of the Ray Society.)

observations which he has supplied. He felt bound to relax his rule not to include any notice of work after the year 1870 in the case of the genus *Styelopsis*, Traustedt 1882, as Alder and Hancock had decided to place some of the forms which have since been put under *Styelopsis* in a new genus, and had left a blank in their MSS. for a name.

The coloured plates are very successful and the arrangement whereby each plate is faced by its description is admirable. By the courtesy of the Ray Society we are able to reprint two of the figures from the text (see figs. 17 and 18). Most interesting are the brief accounts of the lives of Alder and Hancock, written by Canon Norman and the late Dr. Embleton, which are prefixed to the systematic portion of the work.

Though Shropshire has such beautiful scenery and so many picturesque old buildings and quaint churches, I was surprised to find how little this part of the country is visited by strangers, even in the height of summer.

Photograph by the Rev. E. Collett, M.A.]

FIGURE 14.—WILDERHOPE, BACK VIEW.

It is in these out-of-the-way spots that so much of interest lies, and as old buildings are fast disappearing, some by the hand of time, others by fire, or through their being pulled down to make way for modern houses, no opportunity should be lost of paying a visit to those places which as yet happily remain.

SARAH A. STEWARD.

King's Knot.—At Stirling, near the Castle, is a very ancient structure of earthen mounds and terraces cut in a geometrical pattern, the traditional name of which is the "King's Knot." In Barbour's poem, "The Bruce," written about 1375, it is mentioned as the "Round Tabill," a name also used by Sir David Lindsay in his "Complaynt of the Vapingo," published in 1530. It is believed that, whatever its earlier history may have been, the structure formed part of the royal gardens attached to the neighbouring palace of the Scottish kings. "Round Table" suggests the Arthurian legends, and "Knot," as a term for a garden ornament, is used by Shakespeare, Bacon, Milton and other writers. I should be glad to know (1) of any other similar structures known by the name "Knot"; (2) of any other instance of the association of the terms "Round Table" and "Knot"; (3) of any instance of the use of the term "Knot" by a distinctively Scottish writer; and (4) of any reference to a mediæval game, said to have been called the "Round Table" and played at Stirling.

D. B. M.

ASTRONOMICAL NOTES FOR FEBRUARY.

Mercury will be favourably visible as an evening star during last week of February and first few days of March.

Venus will be brilliantly displayed just before sunrise. Near moon on February 9, at 7 a.m.

Mars will be seen as a morning star rising about 2.30 a.m.

Jupiter will be seen to advantage amongst the stars of Gemini, and will be in view nearly the whole night. Near moon on February 22.

W. F. D.

REVIEWS AND EXCHANGES.

FIGURE 15.—HORNED HEAD-DRESS.
From "Chats on Costume," by the courtesy of Mr. T. Fisher Unwin.)

Chats on Costume. By G. Woolliscroft Rhead. 5¾ inches × 8¼ inches. T. Fisher Unwin. Price 5s. net.

This book is, as it claims to be, a series of chats, and these take us far back into the past. They have therefore some claim to be considered archæological, although the author himself treats the subject as an artistic matter. Scientific accuracy has not always been sought or it would hardly be assumed that clothes were first worn for the sake of decency, nor would it be stated that there is "no people or tribe, however primitive their civilisation, but makes some sort of provision in this respect." There is a good deal of literary and historical interest to be found in the ten chapters which make up the book. We gain an insight into such things as the antiquity of trousers, and the rise and fall of the crinoline. It appears also that in the thirteenth and fourteenth centuries extravagance in dress had already brought down condemnation upon man and woman alike. Moreover, an account is given of the sumptuary laws for regulating and restricting the wearing of cloth of gold and various styles of dress, which will also be found well worth reading.

It would be a good thing if people generally would take to heart some of Mr. Rhead's remarks with regard to dress. He says that "there can be no really beautiful dress unless the spirit of individualism is fostered. Dress should express the wearer and provide an index to character. Indeed it does, as the spectacle of a woman or man following blindly the dictates of fashion is sufficient evidence that he or she possesses no character at all. There is also a manner of dressing and of wearing, a certain elegance that distinguishes people of taste from the vulgar, and gives to each portion of the dress its due importance, and imparts a harmony to the whole as in the composition of a picture, which weaves every detail into one design and impresses the beholder as a masterpiece."

There are quite a number of figures in the text, which add to the attractiveness of the book, as well as many full page illustrations. It would have increased the value and usefulness of the latter if more detailed descriptions had been placed under them, showing exactly what they illustrate.

Special chapters are devoted to such topics as The Doublet and Hose, The Kirtle or Petticoat, the Dressing of the Hair, and Boots and Shoes.

FIGURE 16.—WALKING DRESS, 1810.
(From "Chats on Costume," by the courtesy of Mr. T. Fisher Unwin.)

Elementary Science for the Preliminary Certificate Examination, Section C: Biology, By W. S. Furneaux. 5 inches × 7 inches. W. B. Clive. Price 2s.

Although this book is written for the use of students preparing for a particular examination, it should form a useful introduction to the study of Plant and Animal Life for those who do not need "to get up the subject." Rightly, the intention

is made clear that the student should examine the types and structures for himself, and if he merely uses the volume as a "cram book" it will be his own fault and not that of the author.

A Year's Work with Mother Nature. (Pitman's Object Lesson Series.) By Alyce L. Sandford. 6¾ inches × 8½ inches. 203 pages, illustrated. Sir Isaac Pitman and Sons. Price 3s. 6d.

To this book, which is written by the Headmistress of the Christ Church School, Southwark (well known for its Nature work) the President of the Selborne Society, Lord Avebury, has written a foreword. He says that the examples seem to be wisely chosen, accurately described, and well calculated to arouse an interest in Nature. As illustrating the need for attention sometimes to be drawn to things, Lord Avebury recalls the occasion when he was in the Chair at the Linnean Society, and Darwin read his classical paper on the Primrose. Afterwards, Sir Joseph Hooker, who had spent his life in studying plants, said that up to that time he had never realised the great interest of that beautiful flower.

No one, whether occupied in the teaching of Nature Study or not, could fail to enjoy running through this book. The titles of the lessons are pleasing, "The Guest of Summer" is, of course, the swallow, "Fair Maids of February" are snowdrops, "Bird Cradles" need no explanation, and in the guise of "A London Visitor" we find the sea-gull. As the book is intended for teachers it contains much information and many facts, but we notice such exhortations as this: "Children to supply information by examination of specimens," and "interesting particulars to be taught at the discretion of the teacher."

We hope that the discretion of the Nature Study teacher will lead to the imparting of as little information as possible, for the whole point of Nature Study is that children should learn to acquire knowledge through their own efforts. We notice in the preface that Mrs. Sandford twice calls Nature Study a subject, but in the second case she adds the words "if it can so be regarded," from which we may gather that she looks upon it as do other exponents of Nature Study, as being a method of teaching. In connection with each lesson, a number of suggestions are made for correlating the work with singing and games, with modelling, drawing, and so forth. The illustrations are by Miss Coombe Hatch, who, like Mrs. Sandford, is a member of the Selborne Society, and these should prove most attractive to the children.

Blackie's Nature Knowledge Diary. Complied with Notes on Nature Study, by W. Percival Westell. 5¾ inches × 10¼ inches. Blackie and Sons. Price 6d. net.

Mr. Westell gives some very interesting notes as an introduction to this diary, and he invites suggestions for improving future editions. At present, the book consists first of all of monthly weather charts, on which, presumably, the variations of the barometer are to be indicated by a curve. Some further notes as to the use of the chart might possibly prove useful to those who have not done such work before. The next part of the book consists of columns, in which other details in regard to weather are to be inserted, with records as to the occurrence of birds, insects, and wild flowers. Among the columns are some devoted to "locality, soil, &c.," "trees and hedges," "farm yard," and "garden," and here, again, some idea of what is intended to be recorded might with advantage be indicated. There is also a column which will be found very useful for general notes and observations. Blank pages for sketches, and what is most important, an index to the various columns is added. Messrs. Blackie offer not less that six prizes in the year for the best kept of these "Nature Knowledge Diaries" that reach them by June 30. Altogether, Mr. Westell's "Nature Knowledge Diary" should prove exceedingly valuable. In the title, the words Nature Knowledge are used, and this might be taken to include the making of observations with the use of purchased instruments, but we do not think that when such apparatus is used, the work should be considered Nature Study, for this should be more informal, and should not trespass on the domain of elementary science in which knowledge is systematised.

The Life of Mammals. By Ernest Ingersoll. 5⅜ inches × 8 inches. 555 pages, 15 full-page Colour Plates, and many other illustrations. Macmillan and Co. Price 8s. 6d. net.

In a brief, attractive, and well-illustrated form, a summary of what is known with regard to mammals has been skilfully put together by Mr. Ingersoll. It is not possible to go into very great detail in a book of this size, but almost everything of general interest in connection with mammals is touched upon. As is right, man is included, and the chapter on the great apes is very good, as are also the reproductions of photographs which illustrate it. When dealing with the sabre-toothed tiger, a little note is added, that such an animal might fulfil more nearly the legendary requirements of the "king of beasts" than does the lion, and it is curious to notice that several of the characters of the sabre-tooth are to be seen in the heraldic lion, such as the vast mouth, long head, huge forequarters, and widely spreading claws. When speaking of the so-called English "wild white cattle," Mr. Ingersoll accepts Mr. Lydekker's views on the matter to the effect that they are descendants of the giant native *Urus* or aurochs, but we might mention that Mr. Hedger Wallace in a very careful paper has shown that it is much more likely that they have been derived from sacred white cattle introduced from Italy by the Romans. Most of the illustrations are very pleasing, though the old engravings used here and there are hardly in keeping with the rest of the pictures. We heartily recommend this book to all who are interested in the members of their own class.

By-Paths in Nature. By Frank Stevens. 4¾ inches × 7½ inches. 158 pages, numerous illustrations. The Religious Tract Society. Price 2s. 6d.

This narrative of observations, made chiefly in a country garden, deals more especially with insects and spiders, though we find a chapter entitled "Plants as Shopkeepers." Those who take up this book will, we are sure, feel the desire to finish it and even then be glad of more. The illustrations are of a semi-diagrammatic nature, but they are none the worse for that, though any slight inaccuracies are made the more evident. It is usual in the case of popular books to find that some errors have crept in, and there are, we notice in "By-Paths in Nature," some unnecessarily loose expressions. In Natural History, particular words have definite meanings, and it should be just as easy to use these rightly as wrongly. Take, for instance, the verb "to-mimick": in ordinary language it surely conveys the idea that one living thing imitates another. It would be difficult for a man "to take off" any inanimate body, though he might the noise or movement of machinery. The term mimicry is employed in Natural History when one animal resembles another in appearance or action, therefore, when Mr. Stevens says that larvæ mimic buds, he is not following custom. He is by no means alone, however, for if we remember rightly Mr. Dewar in "The Færy Year" uses the word in exactly the same way.

Birds. "Shown to the Children" Series. By M. K. C. Scott, described by J. A. Henderson. 4¾ inches × 6½ inches. 112 pages, 48 coloured plates. T. C. and J. C. Jack. Price 2s. 6d. net.

Flowers. "Shown to the Children" Series. By Janet Harvey Kelman, described by C. E. Smith. 4¾ inches × 6½ inches. 154 pages, 48 coloured plates. T. C. and J. C. Jack. Price 2s. 6d. net.

In children's books the pictures are usually the important part, and in the two small volumes under consideration we find that the artist's name comes first on the title page. We think that such books will serve an excellent purpose, for in the first place they will tell children what to expect or look for before they go on rambles, and help them to discover what they have seen when they come back again. Altogether, the books are very prettily got up and should prove extremely popular.

Familiar Trees. Volume I. By Professor G. S. Boulger. 5½ inches × 7¾ inches. 160 pages. Cassell and Co. Price 6s.

A notice of the first six parts of this volume has already appeared in NATURE NOTES. It remains for us to say that the first series when bound up makes a very handsome volume. Some, no doubt, will prefer the photographic illustrations to the reproductions of drawings by the three-colour process, but there is no

doubt that the coloured plates add to the attractiveness of the book, and that some of them are most successful.

Lotus Land. By P. A. Thompson. 6 inches × 9 inches. 312 pages, numerous illustrations. T. Werner Laurie. Price 16s. net.

Mr. Thompson lived among the peasantry of Siam for three years, and as a result he produced the volume under consideration and its illustrations. It is a pleasant change to consider the life and art of an oriental country, and "Lotus Land" brings many vivid pictures before us. Attention is drawn to the affection that the Siamese lavish on their children, and the remarkable care which they bestow upon their animals.

The Buddhist religion is touched upon, and the attitude of its members towards warring sects is exemplified in the following ancient parable: "A company of blind men were once walking along a road when it chanced that they met an elephant. Each felt the animal, and then they fell to discussing what it was that they had met. One had felt only a tusk, and he said it was something round and smooth; another had felt the ear, and he said that it was large and flat; a third had felt a leg, and he declared that it was like the trunk of a tree; while a fourth, who had felt the tail, said that it was a rope. Soon they began to quarrel over it, and then from words they proceeded to blows, but a certain sage who had witnessed the occurrence stopped them and said, 'Had you but pieced together the facts which each perceived, you would amongst you have arrived at the truth.'"

Goats for Profit. By Edward C. Tibble. 62 pages. 4½ inches × 7¼ inches. Messrs. Dawbarn and Ward. Price 6d. net.

Utility Fowls: Their Selection, Improvement and Diseases. By H. Francklin. 36 pages. 7¼ inches × 6½ inches. Messrs. Dawbarn and Ward. Price 6d. net.

Many of our readers who live in the country will be glad to hear of the "Country House" Series of Handbooks, which Messrs. Dawbarn and Ward are publishing. One feature of the series is, that each book is written by a man personally engaged in making money at the work with which he deals. Often the authors have never written a book before and it is surprising what pleasant reading such an one as "Goats for Profit" makes. Our eyes are opened to the many opportunities which exist of saving and earning money, by turning our attention to animal or plant produce.

The little book on Fowls describes a certain number of breeds, with their special characteristics. Guinea-fowl and water-fowl are also touched upon and the question of diseases is considered. Other books in the series deal with fowl-houses, feeding and rearing, while Handbooks on various topics of Horticulture either have been or will be published.

Colour-correct (Orthochromatic or Isochromatic) Photography. By T. Thorne Baker, F.C.S., F.R.P.S. 5 inches × 7¼ inches. 95 pages. Messrs. Dawbarn and Ward. Price 1s. net.

Natural Colour Photography. By Dr. E. König. Translated from the German, with additions, original tests and experiments, &c. By E. J. Wall, F.R.P.S. 8¾ inches × 6 inches. 94 pages. Messrs. Dawbarn and Ward. Price 2s. net.

The books which are published by Messrs. Dawbarn and Ward are chiefly small handbooks intended to be of practical utility to those who occupy themselves with the matters on which they treat. The first of the books with which we are now dealing considers ordinary photography in which the tints of the various colours, that are lost, are given their proper value, in black and white. Few scientific terms are introduced but many hints are offered as to the use of colour-sensitive plates and the introduction of light filters of various colours, between them and the objects photographed. The copying of pictures and diagrams, the photography of flowers and photomicrography are dealt with in turn, as well as the taking of landscapes. The second book is a translation from the German and gives a *resumé* of the various processes of colour photography which have up to the present been introduced.

The South Eastern Coalfield: An Introduction to the Study of its Geology. By Malcolm Burr. 62 pages. The Kent Coal Concessions, Ltd. Price 6d.

This small book has been prepared to enable shareholders of the Kent Coal Concessions, Ltd. to understand reports, and to obtain a grasp of the origin and future of a South Eastern coalfield. The tables of the various formations and lists of fossils will be found useful, and an account of the growth of Britain is interesting, as is also that of the Geology of Kent. Appended is a table borrowed from "The Story of a Piece of Coal," by Mr. E. A. Martin, which shows all the different materials that are obtained from coal.

RECEIVED.—*Agricultural Economist; The Animals' Friend; The Animal World; Bird Lore; The Estate Magazine; Horticultural Journal; The Humanitarian; The Naturalist; The Victorian Naturalist; The Totnesian; The University of Colorado Studies; Hull Museum Quarterly Record of Additions.*

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society.*—The following members stand for election: Robert H. Crombie, Esq., Mrs. Ellen Frank, Miss D. Elliot-Smith, Miss I. M. Elliot-Smith, Miss E. F. Stafford, Miss G. M. Silverlock.

Abinger and Shere Branch.—Miss B. Barnard.

Birmingham Branch.—E. Lant Tyndall, Esq.

Croydon Branch.—C. H. Bentham, Esq.

Ealing Branch.—Miss Marjorie Lee, Miss Annie L. Sheale.

Farnham Branch.—M. Yeatman Woolf, Esq.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: E. S. Morphew, Esq., £2 2s.; Lady Farrer, £2; Thomas J. Barratt, Esq., £1 1s.; Captain James Cundy, £1 1s.; Miss A. Garrett, £1 1s.; Mrs. W. Greenwood, £1 1s.; the Rev. A. L. Hussey, £1 1s.; Mrs. Lowther, £1 1s.; W. G. Stapleden, Esq., £1 1s.; Miss L. A. Marshall, £1; Miss Ellen Shadwell, £1; Mrs. Picton Turbervill, 10s. 6d.; the Hon. Mrs. E. V. Boyle, 10s.; Miss E. B. Brand, 10s.; Miss J. Brand, 10s.; Miss Broderick, 10s.; Mrs. Broomhead Colton Fox, 10s.; Miss Broomhead Colton Fox, 10s.; F. C. Clayton, Esq., 10s.; Mrs. Eden, 10s.; Miss Meteyard, 10s.; Mrs. McKay, 10s.; the Rev. F. M. Millard, 10s.; R. M. B. Otter-Barry, Esq., 10s.; Lady Simeon, 10s.; Mrs. Wilkinson Smith, 10s.; Mrs. R. F. Sturge, 10s.: Miss Honora Taylor, 10s.; S. E. Tench, Esq., 10s.; Miss E. Wright, 10s.; Spencer H. Bickham, Esq., 7s. 6d.; A. Culshaw, Esq., 7s. 6d.; Mrs. Anstey Greet, 7s. 6d.; C. H. Regnart, Esq., 7s. 6d.; Miss Hodgskin, 7s.; Mrs. E. Frank, 6s.; C. M. Hall, Esq., 6s.; the North Middlesex Junior Branch, 6s.

The Committee of the Ealing Branch has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: W. S. M. Burns, Esq., 10s.; Robert Gordon, Esq., 10s.; F. W. Lawrence, Esq., 10s.; J. P. Morgan, jun., Esq., 10s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of March 18 and April 15 for the purpose of issuing books to members.

NEWS FROM THE BRANCHES.

Birmingham and Midland Branch.—The Annual Meeting was held in the Council House, Birmingham, on January 30; the Lord Mayor, President of the Branch, in the Chair. The Committee's and the Treasurer's Reports were read and adopted. The report stated that several lectures had been given during the year, and that the number of members remained much the same. The state

EXCURSIONS.

Saturday, December 15.—The party (numbering forty-three) which assembled at Croydon on this day, had several objects in view, but made its way in the first place to Whitgift's Hospital, where the Warden, Mr. Alfred Jones, B.A., standing in the quadrangle, gave a graphic account of the buildings which are under his charge. Afterwards, he showed the party over them, and the kitchen, library, and Whitgift's private room as well as the Chapel were visited. Mr. Jones all the time continued his remarks and showed the beauties and heirlooms of the place. The carving which lines some of the rooms was particularly admired. A little time ago there was a suggestion that the old hospital should be pulled down in order to widen the street, in spite of the fact that several alternative schemes were devised. It took the whole energy of the Croydon Antiquities Protection Society, of which Mr. Whitaker (who is a Vice-President of the Selborne Society) is Chairman, to ward off the danger, and even now it is not entirely averted.

The next place visited was the Old Palace, where Miss Dorothea Latham read a short paper on the building. In this, she traced its history from the tenth century, giving very interesting details with regard to the Archbishops who lived at Croydon, and mentioned the improvements and alterations which they made. She also read an amusing extract showing how the various members of the Court were housed at the time when Queen Elizabeth visited the Palace. The buildings were sold in 1780 by Act of Parliament to Sir Abraham Pitcher, and thirty years later a linen-printing business was carried on there. In 1887 the Duke of Newcastle bought the Palace and presented it to the Community of the Sisters of the Church, which uses it as a Secondary School for Girls.

From Croydon Palace the members of the Selborne Society proceeded to the neighbouring Church, where Mr. Corbet Anderson gave a brief account of that structure and its monuments destroyed by fire in 1867. The origin of Croydon Old Church, he said, was lost in the mists of antiquity. Originally it was surrounded by clear-running trout streams. It was planted near Waddon, spelt Wodens in old writings, possibly from some fane devoted by our pagan Anglo-Saxon ancestors to that deity, whose name is still retained in Wednesday (Wodens day). The church is dedicated to St. John the Baptist, and in the streams surrounding it many early converts to Christianity may have been baptised.

Elfsies, the Priest of Croydon, was witness to a Will in 960. From Domesday Book we learn that William the Conqueror bestowed the Manor of Croydon upon the distinguished scholar Lanfranc, and that here was a Church. After the fire, when the walls fell, the ground plan of a structure, equal in size to the late fabric was revealed; and it was found that the old walls were largely composed of fragments of late Norman, early English, and decorated work, *débris* of the changes which had occurred in the character of the structure during successive periods. Much of these interesting remains were retained by Sir Gilbert Scott, the Architect, and now exist within the walls of the present fabric.

Among Rectors of Croydon may be named Richard de Bury, who was presented thereto by Edward III., whose tutor he had been. Myles Coverdale, translator of the first entire Bible printed in the English language, was consecrated Bishop of Exeter by Archbishop Cranmer in Croydon Church.

The lecture was illustrated by drawings of the principal monuments destroyed by the fire. Mr. Anderson brought his discourse to an end by pointing out various Early English and Decorated fragments which fell out of the walls at the time of the fire and are now utilised in the present structure. Combined with the documentary evidence which has come down to us, the fragments referred to unmistakably prove the great antiquity of the *Old Parish Church of Croydon.*

Finally, the whole party was entertained to tea by Mr. and Mrs. Baldwin Latham, and the proceedings terminated with a vote of thanks to them, to the guides, and to Miss Flint, who organised the excursion so successfully. This was proposed by the Honorary Secretary and seconded by Mr. E. A. Martin, Honorary Secretary of the Croydon Branch.

The sad record has to be added of the death of Mr. J. Corbet Anderson, which took place on January 3, 1907, at the age of 80 years.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Tuesday, March 5.—Conversazione Committee at 5.30 p.m.
Tuesday, March 5.—General Purposes Committee at 6.0 p.m.
Monday, March 18.—Publications Committee at 5.30 p.m.
Tuesday, March 26.—Council Meeting at 5.30 p.m.

EXCURSIONS.

Saturday, March 9.—Lambeth Palace, by the kind permission of His Grace The Archbishop of Canterbury (Vice-President of the Society). Assemble at the Main Gate, close to Lambeth Bridge, at 3 p.m.

Saturday, March 23.—The Lord Chamberlain has kindly granted permission for the Society to visit the state rooms at St. James's Palace, provided that the latter are not required for any Court Ceremonial on this date. Members who wish to attend must apply to the Excursions Secretary for tickets before March 15, and enclose a stamped and addressed envelope. Particulars as to time and place of Meeting will be given on the tickets. Should there be any alteration in the plans, those to whom tickets have been issued will receive a notification.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee*, at 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

Ida M. Roper.—The name of the lichen submitted is *Podetia pungens forma foliosa.*

"**Vic.**"—Your specimens appear to be a species of *Azolla.* It is not a flowering plant but one of the Hydropteridæ, and allied to the ferns. There are no European species, but as one, evidently an escape from a tank in a greenhouse, was found not long ago growing in profusion in a pond in Epping Forest, there is nothing very unlikely in your finding it in the New River at Enfield.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Acting Editor, WILFRED MARK WEBB, F.L.S., Odstock, Hanwell, London, W.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

A SUPPLEMENT TO THE

'BIRDS OF NEW ZEALAND.'

By the late SIR WALTER L. BULLER, K.C.M.G., F.R.S.

Vol. I. of the "Supplement" embraces 250 pages of Imperial quarto, and contains, besides a steel-engraved frontispiece, five hand-coloured plates and forty text illustrations.

Vol. II. contains seven hand-coloured plates (making twelve in all), with numerous text illustrations.

The price to subscribers is Three Guineas per volume; and the edition is limited to 500 copies.

A Prospectus may be obtained on application to

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.

☞ *Athenæum* says:—"This excellent and well-known periodical . . . The articles are all from the pens of authors eminent in their own lines."

PLAINLY WORDED.

KNOWLEDGE & ILLUSTRATED SCIENTIFIC NEWS.

EXACTLY DESCRIBED.

MONTHLY, SIXPENCE NET.

SUBSCRIPTIONS—Yearly 7/6, Half-yearly 4/-. Special for 5 Years, £1 5s.

(All Post Free to any part of the World.)

Contains **up-to-date** articles by the **ABLEST EXPONENTS** in the

VARIOUS BRANCHES OF NATURAL HISTORY & SCIENCE,

Profusely illustrated with full-page Plates, Photo Blocks, and Drawings.

Publishing Office:—27, CHANCERY LANE, LONDON.

OR THROUGH ANY BOOKSELLER.

CHEAP EDITION OF THE LATE DR. RAVEN'S HISTORY OF SUFFOLK.

In crown 8vo, tastefully printed in old-face type, and bound in cloth gilt lettered, price 3s. 6d. net.

A POPULAR HISTORY OF SUFFOLK

BY THE LATE

JOHN JAMES RAVEN, D.D., F.S.A.

Author of "The Church Bells of Suffolk."

"The volume is superior to some of its predecessors in literary skill and in fulness of local knowledge."—*Standard.*

"Where all is so good it is difficult to make choice, but the tenth chapter on 'Colleges, Lollards, &c.,' is specially interesting."—*Literary World.*

"Canon Raven has assuredly produced the most readable as well as the most discriminating history of this interesting district that has got itself into print."—*Black & White.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

A SUITABLE BOOK FOR THE CHILDREN.

Bed-Time Fairy Tales.

By HAROLD HAMEL SMITH.

BEAUTIFULLY ILLUSTRATED. Fcap. 4to. Price 3s. 6d. net.

LONDON: JOHN BALE, SONS & DANIELSSON, LTD.,
83-91, GREAT TITCHFIELD STREET, OXFORD STREET, W.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY
J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

WILFRED MARK WEBB, F.L.S.,

(Acting Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides) to Schools and Natural History Societies, on Zoology, Botany, or Nature Study.

For Terms and Dates, address WILFRED MARK WEBB, Odstock, Hanwell, London, W.

No. 208. Vol. XVIII. April, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED IN THE ABSENCE OF

G. S. BOULGER, F.L.S., F.G.S.,

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College,

BY

WILFRED MARK WEBB, F.L.S.,

Lecturer on Biology and Nature Study to the Surrey County Council.

CONTENTS.

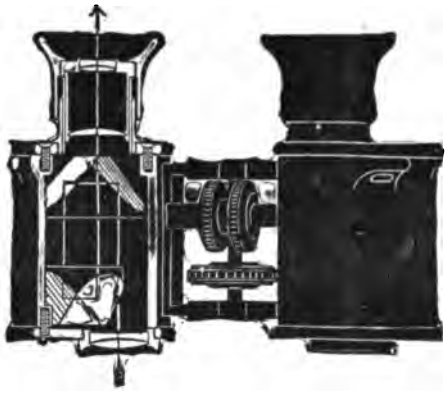
	PAGE
A PEAT-MOSS IN GALLOWAY. By L. Copland	61
SELBORNIANA	63
NATURAL HISTORY NOTES.—Gadwall.—Bower Birds' Nests	65
NATURAL HISTORY QUERIES.—Answers.—Comfrey.—Robins killing their Parents	66
ASTRONOMICAL NOTES FOR 1907	66
REVIEWS AND EXCHANGES	66
SELBORNE SOCIETY NOTICES	76
ANSWERS TO CORRESPONDENTS	80

For the Objects of the Selborne Society and Terms of Membership, see the second page of the cover.

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.
CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

The Naturalist's Field Glass.



GOERZ TRIEDER BINOCULARS.

HIGH POWER. LARGE FIELD.

LIGHT AND COMPACT.

♠ ♠ ♠ ♠

THREE OPINIONS.

"For my own special use. . . . . I have found it absolutely the best I ever looked through."—F. G. AFLALO.

"With my glasses—the GOERZ Trieder Binocular No. 30, 9x—I have been able to distinguish sea-birds on their nests two and a half miles away; at a distance of a quarter of a mile a bird the size of a sparrow can be recognised. No better aid for observing such far-away objects can be obtained or desired."—Mr. OLIVER G. PIKE, in *Woodland, Field, and Shore.*

"I was the happy possessor of a pair of GOERZ Trieder Binoculars. Every one praises his own glass, but of all those I have tried *none has been so good as this glass for my purpose.*"—Mr. HARRY F. WITHERBY, F.Z.S., M.B.O.U., writing in *Knowledge* upon his Ornithological Tour through the Soudan.

OF ALL OPTICIANS. DO NOT ACCEPT SUBSTITUTES.

LIST No. 98 FREE ON APPLICATION TO—

C. P. GOERZ, 1-6, Holborn Circus,

LONDON, E.C.

ALL RIGHTS RESERVED.

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 208. APRIL, 1907. VOL. XVIII.

A PEAT-MOSS IN GALLOWAY.

By L. COPLAND.

LEAVING the old Border home, with its picturesque combination of thirteenth century battlemented tower, red brick Georgian house, and white-washed gable, let us follow for half a mile the avenue of "cauliflower" oaks, trees that might compete with any in Richmond Park, and must have been in their full splendour in the days when Dr. Johnson vowed that timber for a walking stick was not to be found in Scotland. Then, taking the road over the plain stretching to the river, and presently crossing a field, we enter the belt of woodland that lies between the cornfields and the moss. The Scotch fir, when perched on the hillside, gnarled and twisted by exposure to every breath that blows, may then best please the artist's eye, but there is a profound satisfaction in gazing down these vistas of tall "pillared pines," with their clean warm-tinted stems, each fit "for the mast of some great ammiral."

Let us keep to the path, for if we left it the undergrowth of bracken, four, five, and even six feet high, would make our progress a slow one. Soon the wood becomes clearer, open spaces are carpeted with flowerless heath and blaeberry, white stemmed birches spring up between the firs, and the size of the trees gradually dwindles till only self-sown, tiny seedlings straggle after us as we emerge on the moss and begin to wade through the heather. The early Scotch heath with its crimson bells is over, and the pale bell-heather occurs only here and there, but the ling is in full glory. What a far-stretching glow of colour! How delicious the warm honey-scented air, and how exquisitely varied the pearly purples and rosy-pinks of those flowering sprays and masses, each seeming more beautiful than the last. Nor is there wanting among them a plant of white luck-bringing blossom, not very uncommon here. But

the abundance of cotton grass with its silvery tassels warns us that this is no dry upland moor we are crossing. Keeping, however, to those tussocks of wiry red-brown grass we may safely pause to study this patch of black peat set with little separate plants of the white beak-rush, and the hairy crimson rosettes of the murderous sun-dews. (The three British species are all found here.) On one of their slender flower-stems a minute white blossom is fully expanded, a sight which, curiously enough, many a botanist has sought in vain. On rougher ground, through grey red-capped lichen struggles the wild rosemary or *Andromeda*, with its pink waxen bells and narrow rolled back leaves. Those orange brown seed-vessels have succeeded the yellow flowers of the bog asphodel not that of the Elysian fields, which must surely be the one (*Asphodelus fistulosus*) growing round the old Greek temples at Paestum, as if some magic touch had set a tuft of rushes flowering, each green spike with opening stars of white daintily striped blossom. Now let us cross this bit of softer bog with its patches of pale green, faded-primrose or crimson-stained sphagnum, the last recalling a dim nursery legend that this hue shows where the wicked Claver'se once shot some hapless Covenanter. Over the richly varied tints of this bog-moss meander the thread-like stems and tiny round leaves of the cranberry, with its many coloured berries, cream specked with red, pink and deep claret, and to vary our feast we may on drier ground look for the fruit of the crowberry, set like small black peas among its shining heath-like leaves. But what live creatures possess these delightful solitudes? Over that dark pool flit great red and blue dragon flies, from the heather comes "the murmur of innumerable bees," the owner of that reptilian-looking head watching us from the bank wriggles forth, not the possible adder, but a small brown lizard, locally called a man-keeper. Basking on yon sunny spot an old cock-grouse is discoursing to his brown wives in vigorous bird Gaelic; his theme, it may be, the intrusion of those low birds, the gulls and the sheldrakes, who have set up a nesting ground on this special domain of the snipe and the moor-fowl. The ubiquitous rabbit has no great relish for bog-land fare, and during this harvest season the partridges and pheasants are happy among the corn-stooks, but to-day we are graced by a rarer sight, for yonder by those birch trees two roebucks are fighting, and so engaged in hustling and chasing one another that they take no heed at first of our presence. Now they have winded us, and pretty, graceful creatures, go flying with long bounds over the heather.

On that isolated clump of firs far out on the moss there is a small heronry, the birds having vainly attempted to settle nearer the house, but having been driven off by the rooks. The squirrels that chase each other over the old Spanish chestnuts in the home park, occasionally stray into the wood, but under the Scotch firs, the small, hard cones seem untouched, while those of the spruce elsewhere are stripped of the scales, from behind

which the little marauders extract the winged seed. The long, sweet whistle of the curlew, the cry of the plover, belong to the wild and lonely charm of the moorland, and, as in the days of the moss-troopers, the croak of the corby still sounds ominously over these wastes. Among the pines the harsh note of the jay breaks in on the cooing of the wood-pigeon, and twilight brings eerier music as the owl sails past and the nightjar dashes by. But on this one summer's day, 'twere vain to attempt to learn what are the many lesser birds that flit through the woodland, or the rarer waterfowl that in winter stray up here from the tidal river.

Turning homeward by another route we reach, ere long, the part of the moss cut for fuel. The ground is lowered eight or nine feet, and set with little stacks of drying peats. The exposed vertical section shows no embedded trees, but an old canoe was once discovered and promptly dried and used for "kindling" by the finder. From the peatfield and back through the firwood we follow the cart track, its surface overgrown with green velvety moss embroidered with stars of yellow tormentil, and he delicate trefoil leaves of the wood-sorrel. On either hand the broad shield fern grows in wonderful luxuriance, one isolated "shuttlecock" showing eleven great fronds, some of them four feet in length, scarcely recognisable as the same plant, which, outside, barely peeps through the heather. A narrow path now skirts the peaty ditch at the edge of the wood. In the brown water grows the bur reed, dear to designers, with its spiked green balls and ribbon like leaves, while on the banks great plants of hard fern with their tall, narrow central spore-bearing spikes and broad shining barren fronds, suggest a kinship with forms in tropical regions. And now we again reluctantly set foot on the prosaic Macadamised road, glad to think that absence of fall in the land prevents in this case any attempt at "reclaiming" one of Nature's flower-gardens, and that it will continue in the future as it has been in the past, a sanctuary for bird, beast, and the rarer plants of the moorland.

SELBORNIANA.

THE SELBORNE SOCIETY.—THE Annual Soirée will be held on Friday, April 26, in the theatre and halls of the Civil Service Commission (Old London University), Burlington Gardens, by kind permission of the First Commissioner of His Majesty's Works. The Rt. Hon. Lord Avebury will deliver an address.

The Council has decided to make a small charge for all tickets, which must be obtained from the head offices of the Selborne Society, 20, Hanover Square, London, W. (See page 79 of this number.)

A Special General Meeting of the Society has been called for the purpose of modifying some of the Rules, and will be held at 20, Hanover Square, on April 23, at 5.30 p.m. The date of the Annual General Meeting has been fixed for May 30.

LETTERS OF JOHN MULSO TO GILBERT WHITE.—So little comparatively is known about the personality of Gilbert White that any details bearing upon it will be eagerly welcomed. We can but echo Mr. Jesse's lament that the letters of Gilbert White to his friend John Mulso have all been destroyed, but we must congratulate ourselves on the fact that the other side of the correspondence has come into the hands of the Earl of Stamford (Vice-President of the Selborne Society), one of the Naturalist's great-grand-nephews, and has been ably prepared for publication by another great-grand-nephew, Mr. Rashleigh Holt White. The book is published by Mr. R. H. Porter, 7, Princes Street, Cavendish Square, and the price is 7s. 6d. net. A review appears on page 66 of this issue.

GOLD MEDAL OF THE CAMP FIRES CLUB.—The Camp Fires Club of New York has decided to present, annually, a gold medal to the man who during the year has rendered the most distinguished services in the preservation of wild game and forests and in the general promotion of the love of Nature and out-door life. We are exceedingly pleased to hear that the first award has been made to Dr. William Temple Hornaday, on account of his book entitled "Camp Fires in the Canadian Rockies" (T. Werner Laurie), which we recently had the pleasure of reviewing in NATURE NOTES.

SOUTH EASTERN UNION OF SCIENTIFIC SOCIETIES.—At the Woolwich Congress in June, several slight alterations in the Rules will be proposed. Berkshire, it is suggested, shall be eligible to join the Union. Photographic Societies shall affiliate on the same terms as School Natural History Clubs. The cost of admission to the Congress shall be raised to 3s. for members of the Affiliated Societies, and to 4s. for others.

LANCASHIRE UNION OF NATURAL HISTORY SOCIETIES.—The first annual Conference of this Union was held during March at Accrington. All the affiliated Societies were represented by numbers of delegates, and it is pleasant to record that the meeting was an unqualified success. Very much more important and useful work can be done by Societies acting in concert than each individually can ever attempt.

BIRD PROTECTION.—New Wild Birds Protection Orders have been issued, during the month, in connection with the County of Carmarthen and the County Borough of Hastings.

EXHIBITION OF FARM AND GARDEN PRODUCE.—The Women's Agricultural and Horticultural International Union

is organising an exhibition and sale at the Botanic Gardens, Regent's Park, on July 17 and following days. There will be an exhibit of Nature Study which will take a rather original form. There is no doubt that much observational work has at present to be carried on in-doors and instead of the exhibition of pupils' work the idea is to show "a model room or laboratory for the teaching of Nature Study." We have no doubt but that teachers, who are naturally more interested in what is, than in what ought to be, will welcome this practical step.

NATURE STUDY COURSE FOR WOMEN.—A Nature Study Course will be held at the Horticultural College, Swanley, from July 27 until August 10. It will be of a similar character to those which have been so well carried out in former years.

AILSA CRAG.—We are very sorry to hear the announcement that Ailsa Crag has been leased for quarrying purposes and sincerely hope that the danger may be averted.

SMALL HOLDINGS.—The Board of Agriculture has circularised the County Councils with a view to finding out what the various Small Holdings Committees in the country have been doing.

"BIRD LIFE OF THE BORDERS."—Mr. Abel Chapman's well-known work on the "Bird Life of the Borders," has been out of print for some years, and copies have been eagerly sought after. The appearance of a new edition which Messrs. Gurney and Jackson will publish during the month will be looked forward to with interest by a wide circle of naturalists all over the country.

THE EDITOR.—Professor Boulger has safely returned from Peru, and will at once resume his duties.

NATURAL HISTORY NOTES.

480. Gadwall.—This duck, which is rare in most parts of the British Isles, is of special interest in connection with this spot. Some years ago a pair of Gadwall were caught in South-acre decoy. These were pinioned and turned down on Narford lake, three miles distant, where they bred freely, attracted others, and spread over a great part of East Anglia. The decrease of all kinds of duck in these parts during the last few years has been very marked, and though Narford Lake is a sanctuary for wild-fowl, there are but few there now. The reason for the Gadwall's desertion of its original haunt is quite a puzzle.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

481. Bower Birds' Nests.—May I point out that the "bower" which these birds build is in no sense whatever a *nest*, but simply a run or garden used for courtship, varying in design according to the species of Bower Bird by which it is built? The eggs are laid elsewhere as Mr. Blair says on page 49. A full account of these birds will be found in Gould's "Birds of Australia" (1848).

Hale End, Chingford. C. NICHOLSON.

NATURAL HISTORY QUERIES.

ANSWERS.

119. Comfrey.—According to Professor Henslow, who has recently brought out a most interesting little book on the "Uses of British Plants," comfrey "was used for quinsy and whooping cough, as well as for bruises," also "the foliage, when young, is often eaten in the country as a vegetable; it also affords excellent fodder for cattle." One or more of these uses may account for its being grown in gardens, especially the blue or purple form, which is less common, and perhaps therefore more attractive than the white. This is a reply to No. 116.

Hale End, Chingford. C. NICHOLSON.

120. Robins Killing their Parents.—Mr. Blackett (No. 117) may be quite sure that there is *no* truth in the statement that "robins do not often live more than a year," if it is based on the superstition that robins always kill their parents. Like all other superstitions, this one is due to ignorance and a lack of observation, founded, so to speak, on a fact. Robins fight desperately at pairing time, and do not hesitate to attack any of their own species, as well as other birds, which may intrude on the particular estates, demesnes or kingdoms which they look upon as sacred to themselves. Hence pitched battles between fathers and sons, or brothers, or any other male relations are frequent, and one (or sometimes both) of the combatants *may* be mortally wounded; but the killing is merely incidental and not in the nature of a family vendetta. On the contrary, this habit is a wise provision of Nature, tending to the prevention of overcrowding, the distribution of robins being in every way more beneficial than their concentration.

Hale End, Chingford. C. NICHOLSON.

ASTRONOMICAL NOTES FOR APRIL, 1907.

Venus will be a morning star, rising about one hour only before the sun. Very near Saturn on April 21.

Jupiter will be visible throughout the evening hours near the star *Eta Geminorum*. In conjunction with the moon on the evening of April 18.

Shooting Stars may be abundant on the night of April 21. Their flight will be directed from a radiant point situated a few degrees South-west of the star Vega in the constellation Lyra.

W. F. D.

REVIEWS AND EXCHANGES.

Mulso's Letters to Gilbert White. Edited, with an introduction, by Rashleigh Holt White. 6 inches × 9 inches. 362 pages. R. H. Porter. Price 7s. 6d. net.

These are letters written to Gilbert White by his life-long friend, the Rev. John Mulso, and they afford us, as Mr. Rashleigh Holt White says in his introduction, "Almost the only contemporary estimate of the naturalist's character." Judged, however, from a purely unbiassed standpoint, these letters must command attention, and even to those (and there must be few now) to whom their recipient is unknown, they will prove of no small interest. They practically tell the life-story of a clever, or we might say brilliant, clergyman of the eighteenth century. His hopes and fears, his family relations, his preferments, are discussed, as are his amusements, his ailments even, at a time when facilities for travel and conditions generally were very different from what they are now. To lovers of Gilbert White, the allusions to his character and movements will have a special attractiveness. It was to Mulso's sister (afterwards Mrs. Chapone) that Gilbert

White's poem, "The Invitation," was sent, and the Mulso family offered a number of criticisms upon it. In one of the early letters we have the picture of Gilbert White as a sportsman. Mulso says:—

"You have now an Opportunity of paying my Devoirs to Tom Mander. I presume You are popping and snapping so that a Farmer can't walk his own Fields in Security for You. Tom can walk farthest, but You shoot best; I fancied I have drawn your characters, tho' I may add, Tom drinks cyder longest, but You take ye larger Glasses at first. I thank you for your account of yourself at Chalgrave; there is no man understands a Retreat, I see better than yourself."

Gilbert White, it appears, must continually have urged Mulso to ride on horseback instead of in a carriage, as being better for his health, and we are treated at every turn to accounts of Mulso's behaviour in this respect, not to mention his troubles with his horses. Gilbert White lent him one, but it was promptly returned with very stringent criticisms; and speaking about a visit to Gilbert White when proctor at Oxford, Mulso wonders whether it would be as agreeable to the former as to the visitors, saying:—

"And I must own it would have an odd Sound when the Provost sends to know what Noise that is in his College at One in the Morning To Have him answer'd 'Sr. It is Ye Proctor wth two Girls and Ye Mad Parson of Sunbury' so, see Ye to it."

Mr. White has reproduced a facsimile passage from another letter in which Mulso says that Gilbert White's work will immortalise his place of abode as well as himself; but we have quoted enough, and will leave to our readers the pleasure of finding out other references for themselves, when the book comes into their hands, as it assuredly ought to do.

The Story of My Heart. By Richard Jefferies. 4½ inches × 6½ inches. 207 pages. Frontispiece. Longmans, Green and Co. Pocket Edition. Price 2s. net.

In republishing "The Story of My Heart," by Richard Jefferies, Mr. C. J. Longman has collected together such few scraps of Jefferies' writing as remain, which seem to throw light on its genesis and on its meaning. The following lines are from an analysis which Jefferies himself drew up:—

"This book is a confession. The author describes the successive stages of emotion and thought through which he passed, till he arrived at the conclusions which are set forth in the latter part of the volume. He claims to have erased from his mind the traditions and learning of past ages, and to stand face to face with Nature and the unknown. The general aim of the work is to free thought from every trammel, with the view of its entering upon another and larger series of ideas than those which have occupied the brain of man so many centuries. He believes that there is a whole world of ideas outside and beyond those which now exercise us."

Costume: Fanciful, Historical, and Theatrical. By Mrs. Aria. 6 inches × 9 inches. 259 pages. Illustrated. Macmillan and Co. Price 10s. 6d. net.

Mrs. Aria has afforded us a most pleasing and readable account of classic, mediæval, and more modern dress, and the drawings by Mr. Percy Anderson give an additional charm to the work. The bright colours of the dresses chosen for the plates particularly lend themselves to reproduction by the three-colour process. The result is that the coloured figures are most effective and much more pleasing to the eye than is usually the case with pictures thus produced. We might mention particularly the Armenian peasants and the girl in the dress of the eighteenth century. There are also a very large number of other illustrations which, like the letterpress, are printed in sepia-tinted ink. Oriental dress comes in for attention. Chapters are added on fancy dress, which will be useful to those who have sometimes at a moment's notice to choose a costume, and dancing dresses and theatrical dress are not forgotten. Both author and illustrator are agreed in regarding dress as one of the fine and essential arts. The work is dedicated to the memory of Sir Henry Irving, who said: "You can take it, that the right thing on the stage is at once the most effective and the most becoming"; and commenting upon this, Mrs. Aria says: "A wise doctrine which may be applied with irrefutable truth to the art of costume on and off the boards—a doctrine which may obtain as guidance through the land of dress in all the centuries, under all circumstances, past and to come."

The Principles of Horticulture: A Series of Practical Scientific Lessons. By Wilfred Mark Webb. 6¼ inches × 8¼ inches. 136 pages and 75 illustrations. Blackie and Son. Price 2s.

This book sets forth clearly and very attractively the principles underlying the study of horticulture. It is arranged in a series of practical lessons which should

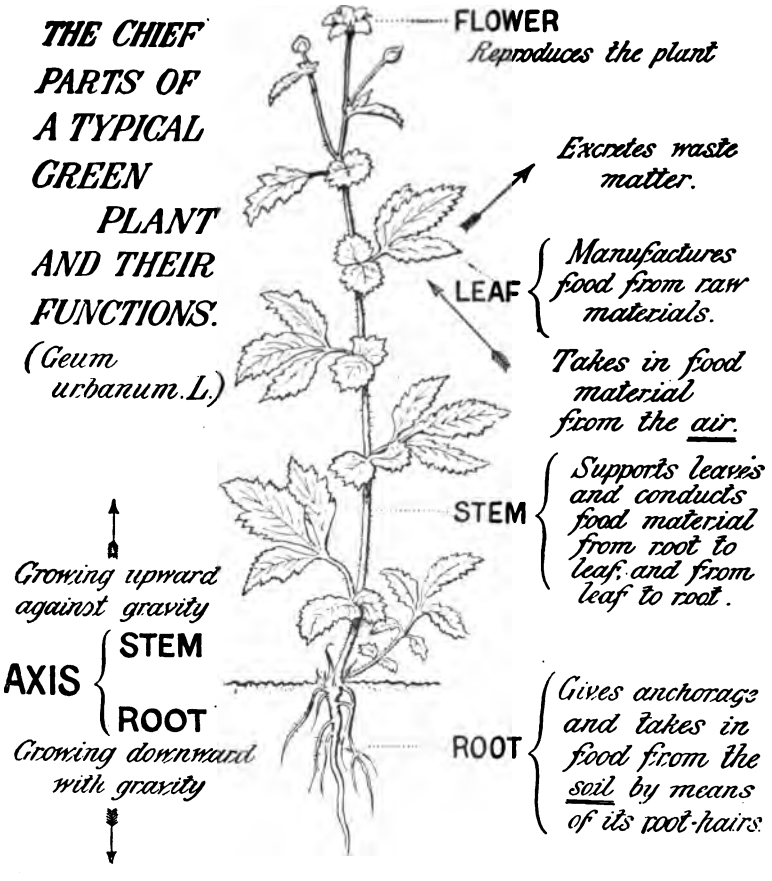

THE CHIEF PARTS OF A TYPICAL GREEN PLANT AND THEIR FUNCTIONS.
(Geum urbanum. L.)
FLOWER
Reproduces the plant
Excretes waste matter.
LEAF
Manufactures food from raw materials.
Takes in food material from the air.
STEM
Supports leaves and conducts food material from root to leaf, and from leaf to root.
Growing upward against gravity
AXIS
STEM
ROOT
Growing downward with gravity
ROOT
Gives anchorage and takes in food from the soil by means of its root-hairs

FIGURE 23.—AN ANNOTATED DIAGRAM OF HERB BENNET.

(From "The Principles of Horticulture," by the courtesy of Messrs. Blackie and Son.)

be of great value to all—whether amateurs or professionals—who take any interest in plant life.

The lessons are based upon the student's own observations and experiments, and can be carried out without the aid of a microscope or other expensive apparatus, although further instructions are given for the benefit of those who

wish to proceed to microscopical work. The materials used in the lessons are easily obtainable by the student and are so chosen that each point to be demonstrated can be seen with the naked eye.

The first chapter contains valuable suggestions on the keeping of notes and the labelling of drawings. Subsequent chapters deal with Seeds and Seedlings, Conditions of Germination, the Food of Plants and how it is obtained, Stems, Roots, Leaves and their Modifications, Flowering and Non-flowering Plants, Green and Non-Green Plants, the Structure of Flowers, and so on. Some chapters are also devoted to Vegetative Reproduction, Fertilisation, Hybridisation and Selection, and to Parasitic Fungi. There is also advice on the treatment of injurious insects, and information about those which may be considered to be the horticulturist's friends.

FIGURE 24.—A FRUIT OF ASH, dissected to show the seed and the embryo within, lying in the food material or endosperm.

FIGURE 25.—A COCKCHAFER (Beetle), one of the Coleoptera.

(From "The Principles of Horticulture," by the courtesy of Messrs. Blackie and Son.)

The fungoid diseases of plants are tabulated, as indeed are the insect pests (see Figure 25). An appendix contains a list of the various families of Flowering Plants and Ferns, and the chief plants in cultivation, while the chapter dealing with methods of answering questions on paper should prove a very valuable aid to students who sit for the Royal Horticultural or other Societies' examinations.

Special mention must be made of the excellent annotated diagrams (see Figure 23), which form one of the principal features of the book, and which should greatly help to make the work clear and intelligible to those who are unable to attend courses of horticultural lectures. Masters in primary schools where gardening is taught will find much that is of value to them in the management of a school garden.

A. A.

The Gem Cutter's Craft. By Leopold Claremont. 7 inches × 9⅝ inches. 296 pages. Numerous Illustrations. George Bell and Sons. Price 15s. net.

There is hardly any one who could fail to be interested by Mr. Claremont's account of his craft. Precious stones appeal to the society beauty, to nearly all her sisters, to the merchant, to the mineralogist, and to a host of others. Atten-

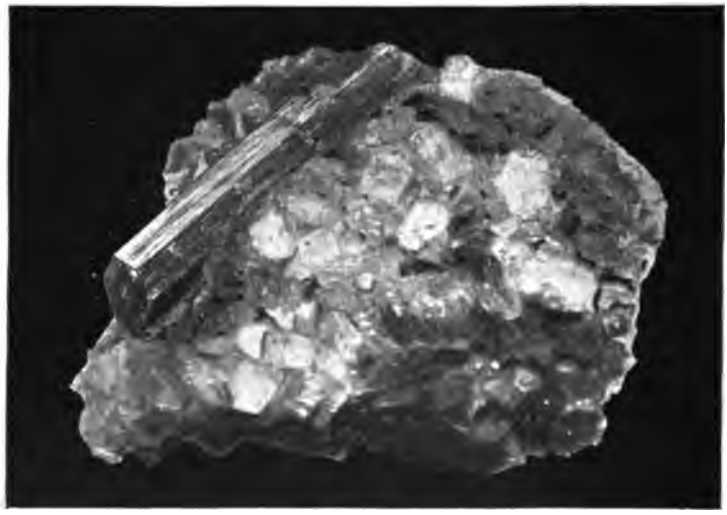


FIGURE 26.—CRYSTAL OF BERYL ON TOPAZ.

(From "A Gem Cutter's Craft," by the courtesy of Messrs. George Bell and Sons.)

FIGURE 27.—The "COLENSO" DIAMOND. Actual size. British Museum.

FIGURE 28.—Size of Brilliant into which the "COLENSO" DIAMOND might be cut.

(From "A Gem Cutter's Craft," by the courtesy of Messrs. George Bell and Sons.)

tion is compelled by the ways in which the rough material is made to show its full beauty, is smoothed and polished so as to reveal its hidden lustre, or skilfully cut so as to refract the light from scores of facets cunningly arranged, which give the maximum effect while at the same time reducing the original size of the stone as little as is possible (see Figures 27 and 28). Those who are not well versed in the subject will learn a great deal from this interesting book.

They will find that various stones which they thought had characteristic colours may appear dressed in quite a different hue. Many may have heard of a blue diamond, but red and green ones are also known. The sapphire may be yellow and the emerald may be sage-green, yellow, white, or rose-pink, though many of its varieties are known under the name of the beryl or aquamarine. We are initiated into the mysteries of nomenclature, and find that certain names convey very little. The oriental topaz is really a sapphire, and the ordinary topaz, which may be distinguished as the Brazilian topaz, may be pink, blue, white, or yellow, and is a silicate of alumina of considerable value; while lastly, there is the Scotch Cairngorm topaz, which is only coloured quartz. There is a chapter on the identification of precious stones, and each of them comes in for individual attention (see Figure 26), while the main facts with regard to mining and cutting are carefully described and fully illustrated. Altogether, Mr. Claremont is to be congratulated on giving us at the same time a valuable addition to general and to special literature.

Birds of the Countryside. A Handbook of Familiar British Birds. By Frank Finn. 4¾ inches × 6½ inches. 190 pages. 12 Coloured Plates and numerous other Illustrations. Hutchinson. Price 5s. net.

Authors seem never to be tired of writing nor publishers of producing books and booklets on birds. Let us hope that for their sake the public also does not weary of buying them. Mr. Finn's book, with its rounded corners, is convenient to carry in the pocket, and the brief descriptions of various British birds, arranged in the order of places in which they are likely to be seen, should prove of considerable use to those who are anxious to identify our feathered bipeds. There are many illustrations and most of them are very attractive. The coloured figures are, however, rather suggestive of their source (they appeared in the columns of *Cage Birds*).

The Commoner Wild Birds of Great Britain. By David T. Price. 4¼ inches × 6½ inches. 62 pages. Gurney and Jackson. Price 1s. net.

This is a still smaller handbook, and it is not illustrated, except by one figure, which gives the names of the external parts of a bird. The work is intended principally for teachers and students who want to gain a practical insight into an interesting branch of Nature Study. Everything seems to be done to make the work of determination easy. We have, first of all, birds of the garden, classified as follows: Those which are larger, of the same size, or smaller than a Thrush or a Sparrow respectively. They are arranged in two columns, one of which refers to birds to be seen in summer, and the other to those which appear in winter. Six other habitats are similarly considered, and the rest of the book is occupied by very short descriptions of the birds, with important points printed in italic type.

One Hundred Photographs of Bird Life. By R. B. Lodge. 4¾ inches × 7¼ inches. 95 pages. Bousfield and Co. Price 1s.

One Hundred Photographs of some Smaller British Mammals. Photographed from Life and described by Douglas English. 4¾ inches × 7¼ inches. Bousfield and Co. Price 1s.

Some of Mr. Lodge's very best photographs are included in this little volume (see Figures 29 and 30). We may mention the Kingfisher, Spoon-bill and the Glossy Ibis. A number of interesting notes have been added by Mr. Lodge.

In the similar handbook by Mr. English we have a selection of his pictures of mammals, and the notes with regard to them (seeing that they are very much fewer in number than the birds considered in the other book) are carried into greater detail, with very happy results. Some of the titles to Mr. Douglas English's figures are rather curious, such as "Flattened to Enter the Trap," and "X-ray of the Harvest Mouse's Tail." Some of the pictures lack detail as regards the hair, and this fault is particularly noticeable in the reproductions of the photographs of an albino meadow mouse: it must be remembered, however, that the making of a picture of a white object is always supposed to be a test of a photographer's skill. Generally speaking, however, this account of our small mammals, which does not endow them with human characteristics, feelings and emotions as Mr. English has hitherto done, will be found most acceptable.

FIGURE 29.—KINGFISHER.
(From "Photographs of Bird Life," by the courtesy of Messrs. Bousfield and Co.)

FIGURE 30.—PUFFINS.
(From "Photographs of Bird Life," by the courtesy of Messrs. Bousfield and Co.)

FIGURE 31.—A HARVEST MOUSE* FEEDING.

(From "Photographs of some Smaller British Mammals," by the courtesy of Messrs. Bousfield and Co.)

FIGURE 32.—ORKNEY MEADOW MOUSE (VOLE).

(From "Photographs of some Smaller British Mammals," by the courtesy of Messrs. Bousfield and Co.)

* Added to the British Fauna by Gilbert White.

Transactions of the Hertfordshire Natural History Society and Field Club. Part I. 5¾ inches × 9 inches. 88 pages. Illustrated. Messrs. Dulau and Co. Price 4s. 6d. net.

The current part of the *Transactions of the Hertfordshire Natural History Society* contains a large number of noteworthy papers. As may be imagined, the fauna of the county comes in for a large share of attention, and there are notes on lepidoptera, beetles, land and fresh-water molluscs, birds, and albino moles.

From a photograph by John Hopkinson.]

FIGURE 33.—LARCH AT RUSSELLS, WATFORD, STRUCK BY LIGHTNING, JULY 9, 1905.

(From the *Transactions of the Hertfordshire Natural History Society*, by the courtesy of Mr. John Hopkinson.)

From a holocene deposit at Watford, Mr. Hopkinson records two trumpet snails, *Planorbis lineatus* and *P. glaber*, which have not yet been found living in Hertfordshire. The river systems of the county are discussed and a paper given on "Phenological phenomena" observed in 1905. The Presidential Address is included and notes by Sir John Evans on a recent palæolithic discovery. From Mr. Hopkinson's account of the weather we are permitted to reprint his illustration of the results of lightning, and we also reproduce an illustration from Mr. James Saunders' paper on "Witches' Brooms" (Figures 33 and 34).

Thomas H. Huxley (*English Men of Science Series*). By J. R. Ainsworth Davis. 5 inches × 7½ inches. 288 pages. J. M. Dent. Price 2s. 6d. net.

This well-considered memoir gives a most valuable, if brief, history of a very great Englishman, whose influence, and the extent of its effect on modern thought, can hardly be over-estimated. We learn the steps in Huxley's early career, his opinion as to the value of biology in education; we are reminded of his strenuous advocacy of the Darwinian theory; of his pronouncements with regard to the higher training of women. Moreover, we are given an account of the controversies in which he engaged, and of the scientific and public work which he so thoroughly carried out. In every way, the quotations and comments bear out the contention that "Huxley's most salient mental characteristics were absolute sincerity and straightforwardness, unrivalled powers of criticism and generalisation, and an equally remarkable faculty of rapid intuition."

FIGURE 34.—WITCHES' BROOM ON HORNBEAM.
(From the *Transactions of the Hertfordshire Natural History Society*, by the courtesy of Mr. John Hopkinson.)

The book includes a discussion as to the position which Huxley held among his contemporaries, and it is concluded by a list of his published works.

A List of British Seed Plants and Ferns. Printed by order of the Trustees of the British Museum. 1907. Price 4d.

The British Museum (Natural History) has published a list of British Seed Plants and Ferns, which has been compiled by Dr. Rendle and Mr. Britten. In all, 529 genera are enumerated. The international rules of Botanical nomenclature, adopted by the Botanical Congress at Vienna in 1905, have been followed.

Therefore some alterations have been made in the specific names of a few plants, and references to the original descriptions made by the compilers have led them to adopt some alterations in spelling. Naturalised plants are indicated by the printing of their names in italics. This list should prove of considerable interest and usefulness to all British botanists.

Aylesbury and its Surroundings. (*Homeland Handbook, No.* 52.) By Walter Moore. 5 inches × 7 inches. 102 pages. Illustrated. The Homeland Association, Ltd. Price 1s. net.

We commend to our readers this addition to the Homeland Handbooks. It deals with the history, antiquities, beauties, and Natural History of the district included and it is illustrated with some excellent reproductions of photographs.

RECEIVED.—*The Animals' Friend; The Animal World; The Estate Magazine; Guide to the Municipal Museum, Hull; The Humanitarian; Knowledge; The Naturalist; The Irish Naturalist; The Plant World;* and Board of Agriculture and Fisheries Leaflets, No. 176, *Poultry Fattening;* No. 180, *Dodder;* No. 181, *Cleansing of Water Courses;* No. 182, *Crimson Clover;* No. 189, *Insurance of Farming Stock against Fire;* No. 190, *Dogs Act*, 1906.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—*Central Society.*—The following members were elected at the last meeting of Council: Miss H. Bickham, Miss Blair, Robert Hill Crombie, Esq., Ernest Leete, Esq., Miss Dora Elliot-Smith, Miss I. M. Elliot-Smith, William Hyslop, Esq., Miss D. Shove, Miss G. M. Silverlock, Miss E. F. Stafford, Miss M. S. Stafford. The following stand for election: Alexander Payne, Esq., Henry Perrin, Esq., W. H. Such, Esq., H. G. Troughton, Esq.

Birmingham Branch.—Mrs. Percy Adams, F. R. Betts, Esq., C. D. Chambers, Esq.

Ealing Branch.—Herbert March, Esq., Oscar Parker, Esq., Mrs. Oscar Parker, John Read, Esq., Mrs. R. H. Read, Miss Annie L. Sheale, Bernard Weaver, Esq.

Hampstead Branch.—Mrs. Freeland, Miss Gerviss, Miss Margaret K. Lee.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Dr. Dudley Buxton, £1 1s.; David Morphew, Esq., £1 1s.; George Musgrave, Esq., £1 1s.; Mrs. Musgrave, £1 1s.; F. C. Stewart, Esq., £1 1s.; George Wheeler, Esq., £1 1s.; G. S. F. Manton, Esq., 10s. 6d.; the Rev. H. E. U. Bull, 10s.; J. Ray Eddy, Esq., 10s.; Mrs. Dockar-Drysdale, 10s.; H. Norman Gray, Esq., 10s.; J. H. Masters, Esq., 10s.; Mrs. Minet, 10s.; M. Pole, Esq., 10s.; Miss Stevenson, 10s.; T. Gore Timbrell, Esq., 10s.; J. H. Barber, Esq., 7s. 6d.; Mrs. Hickman, 7s. 6d.; Ernest Leete, Esq., 7s. 6d.; Dr. A. E. Malaher, 7s. 6d.; Ernest Swain, Esq., 7s. 6d.; M. J. Teesdale, Esq. 7s. 6d.; Mrs. Congreve, 6s.; Mdlle. de la Rive, 6s.; and a donation of 5s. from the Clapham High School Junior Branch.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of April 15 and May 20, for the purpose of issuing books to members.

NEWS FROM THE BRANCHES.

Birmingham and Midland Branch.—On March 13 a lecture was given by Mr. Fred Enock, F.L.S., F.E.S., in the Town Hall, Birmingham, to a large audience. The floor and Great Gallery were reserved for members invited from the Early Morning Adult Schools, the side galleries being filled

by members and friends. The subject of the Lecture was "Wonders and Romance of Insect Life," and it was illustrated by a large number of very interesting lantern slides from photographs taken by the lecturer, many of them being in colour. The lecturer traced the life-history of a number of insects, which, he said, might be found in any town garden. He pointed out their great beauty, and also their marvellous transformations from the egg to the perfect insect. Mr. Enock was heartily applauded at the close of his most interesting and instructive lecture.

North Middlesex Junior Branch.—Though no reports have appeared recently, yet this Branch has been doing very good work; many rambles having been made during the summer and autumn, and meetings held during the winter, when many interesting exhibits have been shown. In October, by the kind invitation of Mr. E. A. Bowles, M.A., F.L.S., through Mr. C. M. Hall, M.M.S., about a dozen of the members visited Myddleton House and Gardens, Forty Hill, when Mr. Bowles personally showed them over his garden. They were delighted with the large collections of trees and plants brought from all parts of the world, and growing in a natural way in this country. They were afterwards hospitably entertained in the dining room of Mr. Bowles.

A series of country rambles will shortly begin under the direction of Miss G. M. Grint, M.C.S., and Miss Lucy Seaman.

EXCURSIONS.

Saturday, February 16.—On this afternoon a visit was paid to the Stone Age Gallery, in the Department of British and Mediæval Antiquities at the British Museum, and a demonstration of palæolithic man was given by Mr. Reginald Smith, Assistant in the Department. Referring from time to time to the adjoining cases of exhibits, he sketched the progress of human industry from the earliest times to the culminating phase of quaternary life, generally known as the Madeleine period, named after the well-known cave in the Dordogne. Palæolithic man himself could be best studied in the Natural History Branch of the Museum, where a series of casts illustrated the evolution of the human skull from ape-like forms, and the exhibition there of eolithic and palæolithic implements shows how difficult it is to dissociate early man from his handiwork. A few natural history specimens are shown at Bloomsbury, but the bulk of the palæolithic collection falls into two divisions: flints from the terrace gravels of rivers, and flint, bone and other manufactured objects from deposits in caves. A diagram was used to explain the position and significance of terrace-gravels, and a relief-map of the Thames valley showed the area covered at one time or another by the Thames in the neighbourhood of London. It was from gravel deposited by this river that the first recorded palæolithic implement was taken towards the end of the seventeenth century, and the workmanship of the Gray's Inn Lane specimen explains how it was recognised as human work in association with the bones of an elephant (doubtless a mammoth). A century later the Hoxne flints, also exhibited, were discovered, and led to the vast discoveries of Boucher de Perthes and his successors. In spite of their enormous age, such flint implements are not necessarily the earliest traces of man. The Selborne Society had recently visited Ightham to inspect Mr. Harrison's series of eoliths, and specimens from the North Downs and Belgium were pointed to as being vastly older than the pear-shaped and other palæolithic forms.

A diagram illustrated the former condition of the Weald and the manner in which the drift had been deposited on the Downs, where eoliths ascribed to the middle Pliocene are discovered. Further back still, flints generally recognised as being of human work, are known from the upper Miocene of Puy Courny (Cantal), and specimens were shown from Thenay (Loir-et-Cher), with traces of fire but no evident marks of international chipping, though some have brought these forward as evidence of man's existence in the upper Oligocene. In a table case a small series of flints illustrated the "hall-marks" of human work, especially the bulb of percussion, but the wonderful carvings in ivory and engravings on reindeer-horn and stone of the cave-dwellers told their own tale, and were indisputable proof of high art among people living in the midst of a fauna now to a large extent

migrated or extinct. Reference was made in conclusion to the wall-paintings discovered in recent years, that were evidently executed by the same race to adorn the caves in which they dwelt, in the province of Santander and Southern France.

Twenty-four members attended this demonstration, and at the end a cordial vote of thanks was passed to Mr. Reginald Smith on the proposition of Mr. Wilfred Mark Webb, seconded by the Excursions' Secretary.

Saturday, February 23.—Streatham has a particular interest for Members of the Selborne Society, as the Rev. Thomas Holt, the grandfather of Gilbert White, held the living there, and was buried in the church on December 4, 1710. The excursion, kindly arranged by Miss Willson to this place proved, therefore, most attractive to the party of sixteen that assembled. The church was visited under Miss Willson's guidance. The registers date back to 1528 and are as complete as any in England. They were open to inspection, and the entry referring to the Rev. Thomas Holt (the father of Gilbert White's mother) was looked up. Miss Willson pointed out that Lord John Russell, of Reform Bill fame, is supposed to have drawn it up in the Rectory hard by. It was discovered that Lord John Russell was baptised in 1710, shortly before the death of the Vicar. This, however, must be another member of the Bedford family, which was long connected with the Parish. On leaving the church it was found that the Old Rectory was being rapidly demolished, and passing on, the members proceeded to "Limatburg," where they were hospitably entertained by Mrs. Meihé and Miss Willson, and had an opportunity of examining the archæological and other treasures collected there, which were displayed for the purpose. They included a now celebrated collection of shoes, some remarkable rigid bodices of the time of George II., pocket sundials, pistol tinder boxes, implements from the Swiss Lake dwellings, and many conchological and geological specimens, including some interesting flies and spiders preserved in amber. The meeting was brought to a close by a very cordial vote of thanks, proposed and seconded by the General and Excursions Secretaries respectively, which was accorded to Mrs. Meihé and Miss Willson, with whose names was coupled that of Miss Dorothy Meihé. In this way ended one of the pleasantest excursions of the season.

Saturday, March 9.—By kind permission of the Archbishop of Canterbury, over sixty members viewed the fine old palace at Lambeth. The party was shown round by Mr. S. W. Kershaw, the Librarian, and by Mr. Parker, who pointed out and explained very lucidly all the points of interest.

Lambeth owes its palace to the dissensions between the prior and monks of Christchurch, Canterbury, and the priests of the Cathedral. The latter, in order to escape annoyance, left Canterbury and finally made their home at Lambeth in the twelfth century. Baldwin tried to build a chapel at Lambeth during the reign of Henry II. The Pope stopped him. Hubert Walter was the next to try and his chapel stood for a short time. It was left, however, for Cardinal Morton to build a permanent one in 1490. Morton's gateway still exists in an excellent state of preservation and is especially interesting inasmuch as every sovereign since and including Henry VII., has passed under it.

The Library, once the banqueting hall, contains over 30,000 volumes and numerous prints, mainly contributed by former archbishops. One case is especially interesting; it contains "The Chronicles of St. Albans," a beautiful fourteenth century history of Britain dating from King Arthur, a "Gutenberg" Testament printed 1450-1455, a missal of the diocese of Limouges, and an exceptionally beautiful copy of the Koran of 1802.

The Picture Gallery contains many gems, Hogarth, Holbein, Romney, Reynolds and other old masters being represented by portraits of previous archbishops.

The Water Tower, now utilised as a post-room, was used by Chicheley when embarking on the Thames.

The Lollards' Tower is the oldest portion of the palace. A small prison chamber, boarded with elm and chestnut boards, is reached, after the laborious ascent of a spiral staircase with a circular wooden newel. This room it is said was used as a prison for the incarceration of Lollards. It is very probable that

no Lollards were imprisoned there, the room instead being used as a cell for refractory monks. The Chapel was built by Boniface of Savoy, on the site of Hubert Walter's Chapel. By order of the Pope he built it out of offerings at the tomb of Thomas à Becket. The present roof is a replica of that of Walter, placed there by Hooley.

Over four hundred bishops and many archbishops have been consecrated here, and it was the scene of Wycliffe's second trial. A complete list of archbishops from 1307 to the present day contains only ninety-seven names.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, April 15.—Publications Committee at 5.30 p.m.
Tuesday, June 25.—Council at 5.30 p.m.

Special General Meeting.

A Special General Meeting will be held at 20, Hanover Square, on Tuesday, April 23, at 5.30 p.m., to consider some important changes in the Rules, which have been drawn up by the Council. For copies of the suggested alterations apply to the Honorary Secretary.

The Annual Soirée.

The Annual Soirée will be held on Friday, April 26, 1907, in the Theatre and Halls of the Civil Service Commission (Old London University), Burlington Gardens, by kind permission of the first Commissioner of His Majesty's Works. The Right Hon. Lord Avebury will preside and deliver an address.

The programme will include a lantern lecture, on Birds and Bird's Nests, by Mr. E. J. Bedford (Honorary Secretary of the Eastbourne Natural History Society) one of the first naturalists to successfully apply photography to this subject. There will be an important exhibition of microscopes and objects of interest. Music by Mr. Franz Zeidler's Bijou Orchestra, Refreshments by Messrs. Moon, Field and Co.

Members, on applying direct to the head office of the Selborne Society, 20, Hanover Square, London, W., enclosing a stamped and addressed envelope, together with 2s. 6d., will receive two tickets. Additional tickets may be obtained in the same way at the rate of one for 1s. 6d., and two for 2s. 6d. On the day of the soirée the price of a ticket to admit one will be 2s. 6d.

Annual General Meeting.

The Annual General Meeting will be held at 20, Hanover Square, on May 30, at 8 p.m.

Excursions.

Saturday, April 6.—Upper Warlingham and district. Meet at Upper Warlingham Station at 3.18 p.m. Train leaves London Bridge (L.B. & S.C.R.) at 2.25. Return fare 2s. 1d. Walking distance about 6 miles. Guide, Mr. Matthew Hunt.

Saturday, April 13.—Eton College, the Chapel, Fellows' Library, Hall, and the Museum, by the kind permission of the Rev. the Provost. Train leaves Paddington (G.W.R.) at 2.33 p.m., Ealing Broadway at 2.46. Take cheap return tickets to Windsor, 2s. 6d. Tea 1s. each.

As the party is limited to fifty, members who wish to attend must apply to the Excursions Secretary for tickets before April 10, and enclose a stamped and addressed envelope.

Saturday, April 20.—Rickmansworth, Croxley Green and Cassiobury Park. Meet at Rickmansworth Station at 3 p.m. Train leaves Baker Street (Met.R.) at 2.20. Return tickets 1s. 11d. Guide, Mr. George Watts.

Saturday, April 27.—Ramble in Epping Forest. Meet at Theydon Bois Station at 3.25 p.m. Train leaves Liverpool Street (G.E.R.) at 2.41 p.m. Cheap return tickets, 1s. 4d. Tea 9d. each. Guide, Mr. A. B. Hornblower.

Saturday, May 4.—Oaklands, Symonds Hyde and Brocket Hall Park. Train leaves King's Cross (G.N.R.) at 2.30 p.m., Finsbury Park 2.36. Take cheap half-day excursion tickets to St. Alban's, 2s., but detrain at Hill End Station at 3.24 p.m. *Change at Hatfield.* Walking distance about 7 miles. Tea at "The Chequers," Cromer Hyde. The return train reaches King's Cross at 9.15 p.m. Guide, Mr. W. Percival Westell, F.R.H.S., M.B.O.U.

N.B.—The times of all these trains should be checked in the April time-tables.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee, at* 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

E. C. R.—This winter our tortoise showed no signs of wishing to bury himself, he was therefore brought into the house and although he did not properly go to sleep, he ate little or nothing.

G. W.—If you intend to convey the suggestion that hybrids might have arisen from the polecats and rabbits, which were described in the note entitled "A Happy Family," it may be said in answer that hybrids only occur between nearly allied species of animals and that there is no evidence to show that such a cross as that indicated could take place. Hybrids between the stoat and ferret are known, and what is more are fertile.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

POCKET EDITION.

Cloth, gilt top, **2/-** net. Leather, gilt top, **3/-** net.

THE STORY OF MY HEART

MY AUTOBIOGRAPHY

By RICHARD JEFFERIES

With Preface by C. J. LONGMAN

NEW EDITION *WITH PORTRAIT*

LONGMANS, GREEN, & Co., 39, Paternoster Row, London, E.C.

CASES FOR BINDING

Nature Notes

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

Price 1/1 net, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd.,

83-91, Great Titchfield Street, London, W.,

They will be pleased to bind same in Cases on receipt of 1/3 net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

CHEAP EDITION OF THE LATE DR. RAVEN'S HISTORY OF SUFFOLK.

In crown 8vo, tastefully printed in old-face type, and bound in cloth, gilt lettered, price 3s. 6d. net.

A POPULAR HISTORY OF SUFFOLK

BY THE LATE

JOHN JAMES RAVEN, D.D., F.S.A.

Author of "The Church Bells of Suffolk."

"The volume is superior to some of its predecessors in literary skill and in fulness of local knowledge."—*Standard.*

"Where all is so good it is difficult to make choice, but the tenth chapter on 'Colleges, Lollards, &c.,' is specially interesting."—*Literary World.*

"Canon Raven has assuredly produced the most readable as well as the most discriminating history of this interesting district that has got itself into print."—*Black & White.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

EUROPEAN ANIMALS: Their Geological History and Geographical Distribution. By **R. F. Scharff, B.Sc., Ph.D., F.L.S.** Numerous illustrations. Large crown 8vo, price 7s. 6d. net.

The author discusses the chief elements in the fauna of the British Islands in detail, before proceeding to the study of their geological history. This forms the introduction to the larger continental problems founded on animal distribution. The various groups of animals are followed to their native lands and the author describes their wanderings from their original centres of dispersal, how they have advanced and frequently retreated again, what obstacles they encountered in their progressive movements and how we can still trace the ancient conditions of land and water in Europe by the existing distribution of animals and plants.

AMERICAN INSECTS. By **Professor Vernon L. Kellogg.** With many original Illustrations by MARY WELLMAN. Square 8vo, 21s. net.

The chapters on insects and flowers, colour and pattern and their uses, insects and disease, are of great interest.

Nature.—"The work is probably the best that exists for anyone desiring an introductory work on North American insects compressed into a single volume."

"An admirable work on general entomology that cannot fail to at once arrest the attention and rivet the interest of the merest tyro."

THE NATURAL HISTORY OF SELBORNE, and "A GARDEN KALENDAR." By **Gilbert White.** Edited by Dr. BOWDLER SHARPE, and with an Introductory Note by THE VERY REV. DEAN HOLE. Illustrated by E. J. SULLIVAN, J. G. KEULEMANS, and HERBERT RAILTON. 2 vols. 8vo, 21s. net.

THE NATURE STUDENT'S NOTE BOOK. By **Rev. Canon Steward, M.A.,** and **Alice E. Mitchell.** Containing Nature Notes, Diary, Classification of Plants, Trees, Animals, and Insects in detail. Interleaved with writing paper. Fcap. 8vo, 2s. net.

By **JOHN BURROUGHS.**

FAR AND NEAR. Studies of Birds and other Animals in Alaska and elsewhere. Crown 8vo, 5s. net.

WAYS OF NATURE. Crown 8vo, 5s. net.

Evening Standard. — "Full of profound and charming insight."

By **ERNEST THOMPSON SETON.**

MONARCH, THE BIG BEAR. With 100 Drawings by the Author. Square Crown 8vo, 5s. net.

ANIMAL HEROES. Being the Histories of a Cat, a Dog, a Pigeon, a Lynx, Two Wolves, and a Reindeer. With 200 Illustrations by the Author. 8vo, 6s. net.

Mr. Seton has always something fresh to tell his readers, and there is a wonderful charm about his pictures of wild animal life. His studies appeal to the young and the old alike. As Naturalist to the Government of Manitoba he enjoys unique facilities for observing the animals with which he deals, in their native wilds.

Punch.—"I give it as my opinion that as a writer about animals Thompson Seton can't be beaten."

Nature Notes.—"A new book by Mr. Thompson Seton is an event—a red-letter day for nature lovers."

NATURAL HISTORY IN ZOOLOGICAL GARDENS: being Some Account of Vertebrated Animals, with Special Reference to those usually to be seen in the Zoological Society's Gardens in London and Similar Institutions. By **Frank E. Beddard, F.R.S.,** &c. Illustrated by GAMBIER BOLTON and WINIFRED AUSTEN. Crown 8vo, 6s. net.

This book is finely illustrated, and will be certain to evoke the interest of any one who has leanings towards this fascinating study.

Land and Water.—"It would be difficult to find a better guide to the mammals, birds, and reptiles represented in most zoological gardens than this volume. The whole work is of the highest order."

EXTINCT ANIMALS. By Professor **E. Ray Lankester, F.R.S.** With a Portrait of the Author, and 218 other Illustrations, demy 8vo, 7s. 6d. net.

In no other book of the kind can there be found such vivid descriptions and such delightful expositions of old-time giants.

Westminster Gazette.—"Will not only delight juveniles, but interest and instruct adults as well."

TWO BIRD LOVERS IN MEXICO. By **C. William Beebe,** Curator of Ornithology of the New York Zoological Park. With numerous Illustrations from Photographs, large crown 8vo, 10s. 6d. net.

The author of this beautifully illustrated book has refrained from using technical names in the text, which is not only extremely lucid, but absorbingly interesting. The people and the country side are by no means overlooked.

Sporting and Dramatic News.—"In the whole range of bird literature there is nothing more picturesque, more admirably descriptive, more entertainingly observant."

WILD WINGS: ADVENTURES OF A CAMERA-HUNTER AMONG THE LARGER WILD BIRDS OF AMERICA ON LAND AND SEA. By **Herbert K. Job.** With an Introductory Letter by PRESIDENT ROOSEVELT. Profusely Illustrated from 160 Photographs from Life, square 8vo, 10s. 6d. net.

Athenæum.—"We can unreservedly praise this book not only for the great beauty and variety of the illustrations, but also for the admirable descriptions."

WASPS, SOCIAL AND SOLITARY. By **George W. Peckham** and **Elizabeth G. Peckham.** With an Introduction by JOHN BURROUGHS and Illustrations by JAMES H. EMERTON. Crown 8vo, 6s. net.

LORD AVEBURY, in the *Daily Chronicle.*—"Their whole book is most interesting."

Athenæum.—"This is a book of the fields; it is one of those delightful narratives with which the name of Fabre is associated."

Daily Telegraph.—"This book is at once a delight and a revelation, the most charming monograph on a natural history subject that we have had occasion to notice in recent years."

THE LOG OF A SEA ANGLER. By **Charles Frederick Holder.** Extra crown 8vo, 6s. net.

Mr. Holder has been the pioneer angler of some almost unheard of "bags," sharks, savage Moray eels, devil-fish, saw-fish, and many other monsters, all of which he describes in minute but interesting fashion. On one expedition he spent days in diving in the lagoons of the coral reefs off the coast of Florida, where the sea is clear as crystal. His description of a great madreporarian coral forest, instinct with innumerable forms of life, is a revelation.

ARCHIBALD CONSTABLE & COMPANY Ltd.

10, ORANGE STREET, LEICESTER SQUARE, W.C.

TELEPHONE—12432 CENTRAL. TELEGRAMS—DHAGOBA.

No. 209. Vol. XVIII. May, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
PRESIDENTIAL ADDRESS. By the Right Hon. Lord Avebury, D.C.L., F.R.S.	81
IN SUNNY GLOUCESTERSHIRE. By D. Steward	85
SELBORNIANA	89
LETTER TO THE EDITOR	90
REVIEWS AND EXCHANGES	91
NATURAL HISTORY NOTES.—A Holiday Note.—Do Dogs eat Carrion?—Goldfinches.—Birds and Wire Netting.—Finches and Scotch Firs.—Little Owl.—The Fairy Martins.—Plant Freaks	96
SELBORNE SOCIETY NOTICES	97

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

Macmillan & Co.'s Books for the Spring.

A Handbook of BRITISH INLAND BIRDS.

By ANTHONY COLLETT. With Coloured and Outline Plates of Eggs by ERIC PARKER. Crown 8vo, 6s.

THE WESTMINSTER GAZETTE.—"Anyone, young or old, who may be anxious to get acquainted with our birds, will find the Handbook excellent for that purpose."

DAILY TELEGRAPH.—"Mr. Anthony Collett's admirable volume."

The *GUARDIAN.*—"An excellent piece of work, which shows a thorough acquaintance with the majority of the species."

NEW IMPRESSION NOW READY.

BIRDCRAFT. A Field Book of 200 Song, Game, and Water Birds. By MABEL OSGOOD WRIGHT. With 80 Full-Page Plates. New Impression, Crown 8vo, 8s. 6d. net.

REDUCED TO 10s. 6d. NET EACH VOLUME.

GREAT GOLFERS: Their Methods at a Glance. By GEORGE W. BELDAM. Illustrated by 268 Action-photographs. 10s. 6d. net.

GREAT BATSMEN: Their Methods at a Glance. By GEORGE W. BELDAM and C. B. FRY. Illustrated by 600 Action-photographs. 10s. 6d. net.

GREAT BOWLERS AND FIELDERS: Their Methods at a Glance. By GEORGE W. BELDAM and C. B. FRY. Illustrated by 464 Action-photographs. 10s. 6d. net.

GREAT LAWN TENNIS PLAYERS. By GEORGE W. BELDAM and P. A. VAILE. Illustrated by 229 Action-photographs. 10s. 6d. net.

THE GARDEN.

Children's Gardens. By the Hon. Mrs. EVELYN CECIL (Alicia Amherst). With about 40 Illustrations. Extra crown 8vo, 6s.

The Book of the Rose. By the Rev. A. FOSTER MELLIAR, M.A. Illustrated. Third Edition. Crown 8vo, 6s.

Elizabeth and her German Garden. Extra crown 8vo. Illustrated Edition. White buckram, gilt edges, 8s. 6d. net. Ordinary Edition, 6s. With Coloured Illustrations by SIMON HARMON VEDDER. Extra crown 8vo, 7s. 6d. net.

The Solitary Summer. By the author of "Elizabeth and Her German Garden." Extra crown 8vo. Illustrated Edition, white buckram, gilt edges, 8s. 6d. net. Ordinary Edition, 6s.

Sun Dials and Roses of Yesterday. By ALICE MORSE EARLE. Profusely Illustrated. Crown 8vo, 10s. 6d. net.

Old Time Gardens. Newly set forth by ALICE MORSE EARLE. Profusely Illustrated. Extra crown 8vo, 10s. net.

A Woman's Hardy Garden. By HELENA RUTHERFORD ELY. With Illustrations. Crown 8vo, 7s. 6d. net.

Another Hardy Garden Book. By HELENA R. ELY. Illustrated. Crown 8vo, 7s. 6d. net.

English Pleasure Gardens. By ROSE STANDISH NICHOLS. Illustrated. Medium 8vo, 17s. net.

THE COUNTRY SIDE.

More Tales of the Birds. By W. WARDE FOWLER. Illustrated. Crown 8vo, 3s. 6d.

Tales of the Birds. By W. WARDE FOWLER, M.A. Illustrated. Crown 8vo, 2s. 6d.; extra gilt, 3s. 6d.

A Year with the Birds. By W. WARDE FOWLER, M.A. With Illustrations by BRYAN HOOK. Third Edition. Enlarged. Crown 8vo, 3s. 6d. Prize Editions 2s. 6d. and 3s. 6d.

Summer Studies of Birds and Books. By W. WARDE FOWLER, M.A. Crown 8vo, 3s. 6d.

Round the Year. A Series of Short Nature Studies. By Prof. L. C. MIALL, F.R.S. With Illustrations. Globe 8vo, 3s. 6d.

Insect Life, Souvenirs of a Naturalist. By J.-H. FABRE. With a Preface by DAVID SHARP, M.A., F.R.S. Illustrated. Crown 8vo, 6s. Prize Library, 2s. 6d.

Life and her Children. Glimpses of Animal Life from the Amœba to the Insects. By ARABELLA B. BUCKLEY. With upwards of 100 Illustrations. 18th Thousand. Crown 8vo, 6s.

Winners in Life's Race, or the Great Backboned Family. By ARABELLA B. BUCKLEY. With numerous Illustrations. 7th Thousand. Crown 8vo, 6s.

Moral Teachings of Science. By ARABELLA B. BUCKLEY. Crown 8vo, 3s.

The Scenery of England and the Causes to which it is Due. By the Right Hon. LORD AVEBURY, D.C.L., LL.D. With Illustrations. Third Edition. Crown 8vo, 6s.

Natural History and Antiquities of Selborne. By GILBERT WHITE, with Notes by FRANK BUCKLAND, a Chapter on Antiquities by LORD SELBORNE, and New Letters. Illustrated. Crown 8vo, 6s.

Natural History of Selborne. By GILBERT WHITE. 8vo, 3s. 6d. net. [*Library of English Classics.*

MACMILLAN & CO., LTD., LONDON.

ALL RIGHTS RESERVED.]

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 209. MAY, 1907. Vol. XVIII.

PRESIDENTIAL ADDRESS.

By the Right Hon. Lord Avebury, D.C.L., F.R.S.

Delivered April 26, 1907.

ONCE more I have to congratulate you on the return of spring and the prospect of summer. Moreover, among the pleasantest incidents of this most charming season of the year—as regards which Tennyson asks:—

> "Can trouble live with April days
> Or sadness in the summer moons?"

the meeting of the Selborne Society is not the least delightful.

If spring came but once in a lifetime, if the sun rose and set once in a year instead of once in a day, if a rainbow appeared once in a century, if flowers were as rare as rubies, and dew drops as diamonds, how wonderful they would seem to us, how they would astonish and delight us!

We undervalue them because they are lavished on us. The very word "common" implies some disparagement. If we trained our minds properly in the appreciation of beauty, we should, on the contrary, wonder at and admire them all the more. As Sir Walter Scott said, "Nothing really worth having or caring about in this world is uncommon." Goethe observes that if a rainbow lasts for a quarter of an hour no one looks at it any longer. The commonest things are the best and most necessary.

> "The meanest floweret of the vale,
> The simplest note that swells the gale,
> The common sun, the air, the skies,
> To him are opening Paradise."

Yet how many men come into the world, and go out of it again, without the least idea what sort of a world it is.

Charles Lamb did not, of course, intend to be taken seriously when he wrote to Wordsworth:—

"Oh! let no native Londoner imagine that health and rest, and innocent occupation, interchange of converse sweet, and recreative study, can make the country anything better than altogether odious and detestable. A garden was the primitive prison, till man, with Promethean felicity and boldness, luckily sinned himself out of it."

But, unfortunately, so many screens interpose between us and Nature; between man and truth! The humours of the eye, the structure of the retina, the nerves, the brain, the air, dust, rain, the state of our digestion, of our health, of our circulation—in short, of our body, and still more of our mind. Heraclitus said that man could never bathe twice in the same river, nor can the river twice receive the same man.

I know you will agree with me that the more that we study Nature, the more we enjoy it, the more we realise the beauty and interest, the complexity and perfection of the world in which we live. It is indeed astonishing that Rousseau can say in the *Nouvelle Heloise* "Il n'y a rien de beau, que ce qui n'est pas" (There is nothing beautiful except what does not exist). Surely the opposite would be truer and more grateful. Some things are more beautiful than others, but all Nature is beautiful. God did not make some things beautiful, but all things beautiful, It is only Man who makes things ugly, even sometimes when copying what is beautiful.

"All the purposes," says Ruskin, "of good which we saw that the beauty of Nature would accomplish, may be better fulfilled by the meanest of His realities than by the brightest of imitations." Stesichorus, in the old story, was deprived of eyesight because he did not appreciate the beauty of Nature.

Reflections are, as a rule, more beautiful than the objects themselves; and the more we reflect the more beautiful the world will seem.

We cannot, I think, imagine any world more beautiful—any world, in Martineau's words, "more sanctifying than our own. There is none, so far as we can tell, under the more immediate touch of God; and none whence sublimer deeps are open to adoration; none murmuring with the whisper of more thrilling affections or ennobled as the theatre of more glorious duties."*

"Broad indeed," said the Emperor Akbar, "is the carpet which God has spread, and beautiful the colours which he has given it."

"L'Année," says Joubert, "est une couronne qui se compose de fleurs, d'epis, de fruits et d'herbes seches."

In spring, "The swallows bring sunbeams on their wings from Africa to fill the fields with flowers."†

Some painters have been accused of decking Nature in too

---

* Martineau. "Endeavours after the Christian Life."
† Jefferies.

brilliant colours. No doubt she knows when to be splendid and when soberer and tenderer tints are more appropriate. But no art can rival the colours of Nature. Those of heraldry, said Hamerton, are "good enough for the splendour of lordly pride, but not good enough for one wreath of perishing cloud, nor one feather in a wild duck's wing."

In the life of Sir W. Napier, by his daughter, we are told that Sir Edward Codrington once, in a conversation at sea, criticised the colouring of Turner, and denied that such brilliant hues ever occurred in Nature:—

"My father," she says, "looked round, and, pointing with his hand to the sea towards the east, said, 'Look here.' . . . As every little ripple rose it was a triangle of burning crimson sheen from the red sunset light upon it, of a brilliancy not even Turner himself could equal in his most highly coloured picture. The whole broad sea was a blaze of those burning crimson triangles, all playing into each other, and just parting and showing their forms again as the miniature billows rose and fell. 'Well, well!' said Sir Edward, 'I suppose I must give up the reds, but what will you say to his yellows? Surely they are beyond everything!' 'Look there!' said my father, pointing to the sea on the western side of our boat between us and the setting sun—every triangular wave there, as the ripples rose, was in a yellow flame, as bright as the other was red, and glittering like millions of topaz lights. Sir Edward Codrington laughed kindly and admiringly, and said, 'Well! I must give in—I have no more to say; you and Turner have observed Nature more closely than I have.'"

Madame de Sevigné, in one of her charming letters, tells her daughter that she had gone down into the country to spend the beautiful days of autumn, and say adieu to the leaves. "They are still on the trees, and have only changed colour; instead of being green they have the colours of sunrise, and of several kinds of sunrise; they form a rich and magnificent brocade of gold. Too often," she continues, "we look at such scenes as if we were walking blind; not knowing where we go, or why we are going; taking for evil that which is good, and for good that which is evil, and living really in absolute ignorance."

Every season of the year and every hour has a beauty of its own, and yet now and then some effect seems to stand out with special brilliance or loveliness—

> "It seemed as if the hour were one
> Sent from beyond the skies,
> Which scattered from beyond the sun
> A light of Paradise."—*Shelley.*

By day we cannot admire too much the brilliance and magnificence of the sun, which, moreover, seems to grow greater and more beautiful as it approaches the horizon, and yet when it has finally set, when the moon rises in all her exquisite beauty, and

the whole heaven sparkles with innumerable stars, we see that the sun hides even more than it reveals.

"If," says St. Basil,* "on a clear night, you have fixed your gaze upon the beauty of the stars, and then suddenly turned to thoughts of the artist of the universe, whoever he be, who has adorned the sky so wonderfully with these undying flowers, and has so planned it that the beauty of the spectacle is not less than its conformity to law . . . . if the finite and perishable world is so beautiful, what must the infinite and invisible be?" It has been said that "the heavens declare the glory of God, but do not tell us of His goodness." I cannot agree; they do both.

We are told by Fielding in his charming book "The Soul of a People," that Buddha "went into the Forest to look for truth. . . . . He left Mankind and went to Nature for help."

To the wise and good, indeed, Nature is divine; but to understand her we must love her, we must feel that we are one with her. People often talk of the supernatural. This is, no doubt, mainly a matter of definition. To me, Nature is all-sufficient and all-covering. What they regard as supernatural seems to me either natural or non-existent. Whatever exists is part of Nature. It is not that those who hold these views wish to lower the so-called supernatural, but that those who hold the opposite opinion seem to us to limit and lower Nature. Nature is infinite. Every fresh discovery reveals new sources of wonder: every problem that is solved opens others. The telescope and microscope create for us new worlds: the spectroscope has answered questions which Comte thought were obviously beyond the range of human ken.

Certainly we naturalists ought to be, and we have Hamerton's assurance that we are, cheerful, unless there is something peculiarly sad or painful in the individual lot.

Moreover, Nature teaches us that possession is not necessary to enjoyment. In mediæval fairy tales the Nature spirits occasionally fell in love with some peculiarly attractive mortal, and endowed their favourite with splendid gifts. But Nature will do all this and more for those who love her.

"If any one," said Seneca, "gave you a few acres, you would say that you had received a benefit; can you deny that the boundless extent of the earth is a benefit? If any one gave you money you would call that a benefit. God has buried countless masses of gold and silver in the earth. If a house were given you, bright with marble, its roof beautifully painted with colours and gilding, you would call it no small benefit. God has built for you a mansion that fears no fire or ruin . . . covered with a roof which glitters in one fashion by

* Basil, Homilies.

day, and in another by night. . . . Whence comes the breath you draw, the light by which you perform the actions of your life, the blood by which your life is maintained, the meat by which your hunger is appeased? . . . The true God has planted, not a few oxen, but all the herds on their pastures throughout the world, and furnished food to all the flocks; He has ordained the alternation of summer and winter . . . has invented so many varieties of voice, so many notes to make music. . . . We have implanted in us the seed of all ages, of all arts; and God our Master brings forth our intellects from obscurity."

Nature fills the heart—not only with joy and wonder—but with gratitude, and I am sure that, however we may differ in politics, in theology, in science, in our views and ideas of life, we all feel our heart full with the delight of spring and the promise of summer.

Our subject is infinite, but I must not detain you by weak words from the keen delight of observation. Our excellent and indefatigable Secretary, Mr. Webb, has prepared for us a rich store of exhibits, for which in your name I thank him, and to which in the name of the Society it is now my privilege to bid you welcome.

IN SUNNY GLOUCESTERSHIRE.

A Reminiscence.

A joy of sight, that still abides with me,
A kingfisher, resting on a tree—
Above a stream.
A tangled garden, more weeds than flowers,
But red with honeysuckle of Nature's bowers—
Like joy and grief.
A brook, where large-eyed love flowers grew;
Skimmed by the May-flies of brightest blue—
Forget-me-not blue.

S. A. Steward.

NEXT to the tranquil, yet ever cheerful scenery of pleasant sylvan Buckinghamshire, that of Gloucestershire appeals most nearly to my fancy.

Dear to my recollection is that of a calm, untroubled summer holiday, once spent at Inchbrook in the latter county—a sleepy little hamlet, comprised of a few straggling cottages.

Inchbrook is near Woodchester, where the well-known Order of Preachers has its abode. The Dominican Priory, with its pretty and happily situated little church on the brow of the hill, gives an added interest to this charming spot.

On the quiet leafy high road, between Inchbrook and Woodchester, but nearest the former—there stands—or stood, for it is some years since I was there—surrounded on three sides by a

garden, an old-fashioned rose-and-jasmine-covered cottage. A cottage wherein were deep window seats, delightful to repose, read, or dream away the happy drowsy hours in; and casements through which, when open, the pink and white blush roses persisted in obtruding their shy, yet inquisitive faces, filling the long low-ceilinged room with the sweet purity of their fragrance. Up and up the roses climbed, nodding past the bedroom lattices, up until they nearly reached the roof, and here they paused to struggle through a portion of broken casement, to "blush unseen, and waste their sweetness" on the sunny but dusty atmosphere of the attics.

But the "wild and winsome jessamine tree," whose

> "Tiny flow'rets seem in glee
> Like silver spray-drops down to fall,"

never aspired to climb so high, but remained, like a modest maiden, clinging gracefully round the porch and the lower casement windows, its subtle perfume mingling sweetly with that of the roses.

There was an upper and a lower garden, the latter being approached from the former by a flight of stone steps. The former was shut off from the road by a tall hedge on which grew the glistening snowberries, and at first sight it seemed as though the dark leaves had been flecked with real snow, so white, large and numerous were the berries.

This little upper garden was kept in the most trim order, from the small, carefully cut lawn, to the border of choice, brilliantly coloured dwarf nasturtiums, a vivid splash of colour with a subdued background of pure green.

I have never, before or since, seen these flowers grow to such perfection as here. Gardeners do not utilise them half so much as they might, nor do people generally realise their great beauty of form and colour. The climbing variety, which seems to be the most popular, is not half so showy, and is very apt to run to leaves, the one or two flowers being almost completely hidden by them.

In one corner of the garden grew an elder-berry tree, and here every evening several jays used to take up their sleeping-place, and how they did quarrel and chatter to be sure, before they finally settled for the night!

Jays are, or were, plentiful in this part of Gloucestershire: we had one as a pet, and a splendid talker he became. At the top of the steps was a low barberry bush, and it was quite a sight to watch the numerous thrushes congregate, pluck the red berries and swallow them like so many pills, with the greatest rapidity imaginable.

At the bottom of the lower garden stood a grain mill, and running parallel was the brook that had at one time fed it, and which, also, I believe, suggested the name of Inchbrook for the hamlet; but the mill had long since fallen into disuse and decay, and half in ruins, and wholly dark and silent, it kept a grim and solitary watch over the place.

Away, over the other side of the brook, lay a cornfield, and beyond that stretched a wide, gently-rising common—part of the common which is described so charmingly by Mrs. Craik—the Enderley Flats beloved of John Halifax. Here flocks of squabbling geese, their harsh noise softened by distance, and one or two sober-minded, sombre-coated donkeys, were generally to be seen wandering whither they listed, to be gathered together again anon, with much shouting and gesticulating on the part of a small urchin flourishing a stout stick in his hand.

And occasionally, on a bright afternoon, one might also see a couple or so of white-robed, black-hatted friars from the Priory, slowly wending their way across the common, thus enhancing the old-world air of peace that lingered round that pleasant scene.

The garden was ever full of life, for plant, feathered, and insect life flourished like the green bay-tree. Many were the butterflies that visited there—tortoiseshells in abundance, and occasionally an emperor, a splendid fellow, whom I longed to catch, but never could.

One species of butterfly that I particularly remember, and have never seen since, was a small blue one—bright blue, it was, the blue of the cornflower—over which I frequently saw it hovering, until its being seemed merged in the flowers themselves, so perfectly did it harmonise in colouring. There was also another butterfly of exactly similar size and description, only it was bright yellow instead of blue.

This lower garden was in strange contrast with the trim upper one, for little or no attempt was made at cultivation; fruit, flowers and weeds (especially the latter) grew in wild and luxurious profusion. Archways of unkempt but picturesque honeysuckle covered part of the pathway leading down to the water's edge, where, along the side of the brook, was a long row of red, white and black currant bushes—currants of the largest size and most delicate flavour. Here, too, grew the wild convolvulus, twining its loving but treacherous embrace round currant and gooseberry-bushes. Often it was cut away, and as often it sprang up with renewed vigour.

Here, again, gently kissing the water as it rippled softly by, grew in abundance the shy forget-me-not, whose blue was only rivalled by the slender-formed, delicate-winged may-flies, which flitted their brief lives away up and down in search of the minute insects that frequented the surface of the water. I have often caught these may-flies, but their exquisite blue was only retained for a short time after death, fading then to a dull, nondescript colour.

In this same spot, on a still, drowsy afternoon, a kingfisher would skim lightly over, almost touching the water, then dive suddenly, fly upwards again, and come to rest for a few seconds on the branch of a low overhanging tree with a small fish in its beak.

The brook abounded with little silvery fish—I am not sure what they were—in spite of the fact that the water was often deeply stained with dyes from some distant cloth mills. At the—

"Breezy call of incense-breathing morn,"

as well as at the close of day, the mill-hands used to pour by the cottage, filling the quiet lanes with their clatter and noisy, curious talk—an uncouth lot in contrast, and yet somehow in keeping, with their surroundings, for Gloucestershire would not be Gloucestershire without its mills and, consequently, its mill-hands.

It was to this spot that an old lady came one day and craved permission to sit awhile in the upper garden and gaze on the scene, which she insisted was altogether identical with the Rose Cottage and common of "John Halifax." But from the situation I fancy she was wrong with regard to the cottage. However, she went away contented, and quite satisfied that she was right.

It was very sweet to linger in the garden at the hour of twilight, when

". . fades the glimmering landscape on the sight,
And all the air a solemn stillness holds,
Save where the beetle wheels his droning flight."

I well remember the beetle. He never failed each evening to go buzzing stupidly round and round the house, bundling blindly against one and then humming more loudly as if in protest, as he recovered himself and flew on.

His companions were the bats, who came and went in silent, ghostly fashion, now flitting suddenly close to one's face, then as suddenly disappearing into the deepening gloom without a sound.

Now and again the harsh, peculiar cry of the corncrake came over the brook from the field beyond, and sometimes a sudden splash in the water spoke volumes to a collie dog, who never failed to accompany anyone rambling in the garden at this hour, and his ears would quiver and prick up, and then, without waiting for permission, he would dart off and plunge wildly into the brook after a water-rat—but I never knew him to catch one, hard as he tried.

Occasionally a bird would wake up—or may be it had not been to sleep—and sing again in the darkening, scented air, its tones gradually growing softer, slower, fainter, until it stopped altogether. Then the darkness fell deeper and deeper, and Nature slept at last in the garden of my remembrance.

D. STEWARD,
Author of "From an Observer's Note Book," &c., &c.

SELBORNIANA.

THE ANNUAL SOIREE.—A full report of the Soirée of April 26 will appear in our June number.

AUTOGRAPH LETTER OF GILBERT WHITE :—

"A copy of the first edition of "The Natural History of Selborne" sold on Saturday last by Messrs. Sotheby, fetched £14. It was at one time in the Rowfant library, and had Locker's *Jester* book-plate. Inserted in it was half of a folio autograph letter of the author addressed to his niece, 'Miss White, at Thomas White's, Esq., at South Lambeth, Surrey,' and dated June 18, 1783. This letter, which is not referred to by Bell or Holt-White, is chiefly concerned with private matters, but the author informed his favourite, Molly, that he had lately found many of the bird's-nest orchis (*Ophrys nidus-avis*) in full bloom."—*Field*, March 30, 1907.

HASLEMERE MUSEUM GAZETTE.—We much regret to learn that this excellent magazine is compelled to suspend its publication until January next, owing to the continued ill health of Mr. Swanton, the able curator of the Haslemere Educational Museum, upon whom the principal labour of the production of the Gazette has fallen. We trust that this rest may completely restore Mr. Swanton's health.

THE STARLING AND THE FRUIT CROPS.—The following paragraph appeared in the *Birmingham Daily Post* for April 5 :—

"Some particulars are furnished in the Annual Report of the Lydney and District Farmers' Club as to a scheme lately adopted, having for its object the extermination of certain birds which have earned the character of being destructive to farm crops in general, and particularly in respect to bush fruit. Some extraordinary figures are given. A number of prizes, from a sovereign downwards, were offered agricultural labourers and others, with the view to rewarding those of them who could destroy the greatest number of these feathered thieves, the hedge sparrow and the starling being regarded as the chief sinners. Altogether during last year the total number of heads sent in reached 2,642. There was a provision that nests might be robbed, and in that case five eggs were counted as equal to one head. Notwithstanding this slaughter, disappointment was expressed that it had not been much larger. The report went on to declare that the starling, though it still had many admirers, had of late years seriously deteriorated in its habits, and was now regarded as a most destructive bird to young growing crops of fruit, which seasons ago it did not touch. With the view to encouraging greater enthusiasm among the destroyers of the birds the club has resolved in future to pay 3d. per score heads brought in, with a champion prize of 10s. to the individual who shall succeed in 'grassing' 800 or more."

To this a correspondent, signing himself "Selbornian," rejoins as follows :—

SIR,—I was sorry to read in this day's *Daily Post* of the scheme of the Lydney and District Farmers' Club for the extermination of certain birds supposed to be destructive to farm crops, and especially of the two above-mentioned birds.

First, as to the starling. The Rev. J. G. Wood, the naturalist, tells us: "The common starling is one of the handsomest of our British birds, the bright mottlings of its plumage, the vivacity of its movements, and the elegance of its form, rendering it a truly beautiful bird. The food of the starling is very varied, but consists chiefly of insects. These birds have a habit of following cows, sheep, and horses, fluttering about them as they move for the purpose of preying upon the insects which are put to flight by their feet. The starlings also perch upon the backs of the cattle, and rid them of the parasitic insects that infest them. It is a voracious bird, the stomach of one having been found to contain more

than twenty shells, some of no small size, and all nearly perfect, a great number of insects, and some grain. Another starling had eaten fifteen molluscs of different kinds, a number of perfect beetles, and many grubs."

One might think that a bird with such credentials would be very welcome to the farmer, and if he did steal a little fruit sometimes he might then be liable to be punished and snared or shot. I know the starling is—like the blackbird and the thrush—very fond of cherries, but I never knew he condescended to take bush fruit. He is a constant visitor to the grass lawns in town and country, industriously picking up the insects, and one feels shocked that his good deeds have not saved him from the savage slaughter.

As to the hedge sparrow (Hedge Accentor) there must be some mistake, for this bird is perfectly harmless to farmer and gardener, he does not devour the young green peas, nor nibble the crocus blooms, but lives mostly upon insects. However, the club boasts of having killed 2,642 of both species during last year, and is preparing to kill an increased number this year, altogether a very cruel practice against the continuance of which I protest, and trust the Selborne Society will undertake a crusade in the neighbourhood of the Lydney Club.

South Yardley,
April 5. SELBORNIAN.

The energetic Honorary Secretary of our Birmingham Branch sends us also the following *a propos* extract from Swaysland's "Familiar Birds."

"Perhaps there is no bird that does so much real good to the husbandman as the starling. To those who only know the bird from its having eaten, in company with its congeners, almost all the cherries and elderberries, or stopped the waterspout with its nest, this may appear startling news, but true it nevertheless is. The starling generally finds a home where meadow-land or turf exists, and its usefulness to the grazier is incalculable. Those who possess lawns may perceive the bird industriously parting the grass in a most ingenious manner with its beak, whilst securing and feeding upon the most destructive grubs and insects that exist."

Almost by the same post another correspondent sends us the following paragraph from the *Standard* of April 8 as to the sagacity of this species of bird, which belongs, it may be remembered, to the Order now placed by ornithologists at the summit of the avian class:—

"A remarkable instance of the sagacity of the starling is reported from Muston Gorse, a few miles distant from Belvoir Castle. A starling had entered a hole in a hollow ash tree which proved too small for its exit. Shortly after another bird of the same species was seen at the orifice, endeavouring to release its imprisoned comrade by seizing the captive just above the beak, and pulling with its feet propped against the tree. Although frightened away, the starling returned and renewed its efforts, which were eventually successful in obtaining the release of its mate. The incident was witnessed by two or three well-known residents in the district."

LETTER TO THE EDITOR.

PURLEY BEECHES.

FROM time to time you have pleaded the cause of the Purley Beeches, and no doubt were equally as pleased as myself that the ratepayers of Sanderstead agreed to raise the greater part of the necessary funds by a special rate. But unfortunately the sum that will be raised is not quite sufficient, and our friends, the City of London Corporation, have been obliged to decline to assist us. We remain, therefore, £240 short of the required

amount, and this has now to be raised. A great final effort is now needed, and it is likely to be as difficult to make it as any that has gone before. I am sure that Members would like to know how matters stand, and perhaps may still like to help. Shillings are welcome where pounds are difficult to get.

58, *Whitworth Road*, EDWARD A. MARTIN.
South Norwood, S.E.

REVIEWS AND EXCHANGES.

Introduction to Plant Ecology for the use of Teachers and Students. By Rev. Prof. G. Henslow. 5 inches × 7¼ inches. 130 pages. Stanford. Price 2s. 6d.

Perhaps addressed rather to teachers than to students, this little book is an admirable sketch of the ground covered by that aspect of Nature-study known as Plant ecology. It appeals mostly to British conditions ; and, though enumerating five types of xerophytic stems and eleven of xerophytic leaves, it does not drive the student to desperation with the preposterous array of new terms coined by Mr. Clements. We are glad to read Professor Henslow's cogently urged defence of the study of external anatomy or morphology from the neglect of some ultra-modern teachers. As an example of the interesting and original illustrations with which the little volume abounds, we may quote this reference to the Common Reed, *Phragmites communis*. "This abounds on the island Rhoda, near Cairo, and while growing in water exactly resembles the native plant in England. But it has spread to adjacent land which is rarely supplied with much water. Here it develops short and sharp-pointed leaves, and has even been called *var. stenophylla ;* but should a growing stem be suddenly supplied with water, the normal form of leaf is at once produced on the same, with the previously formed 'stenophyllous' foliage below."

The Book of the Open Air. Edited by Edward Thomas. Part 1. Complete in twelve parts. 8½ inches × 12 inches. 40 pages. With 5 illustrations in colour. Hodder and Stoughton. Price 1s. net.

That this new and sumptuous publication will contain plenty of the best descriptive writing is evidenced by the names of its contributors, among whom Mr. Warde Fowler, Mr. Dewar and Mr. Walter Johnson appear in the present part, while contributions are promised by Mr. Hudson, Mr. A. H. Patterson, Dr. Gerald Leighton, Mr. Reginald Lodge and Mr. Oliver Pike. There are to be fifty illustrations in colour ; and if the rest are equal to those in this April part, two of which are from photographs by Mr. Charles Reid, of Wishaw, they will alone be well worth the price of the book. Each number is to contain an "Open-air Diary" for the month, and this, with the rest of the letterpress, is beautifully printed in fine bold type (though in double columns), on good paper. Such subjects as rain, dew-ponds, the otter, spring flowers, butterflies and woodpeckers, show that in text and plates all tastes are considered.

Field-Path Rambles. By Walker Miles. Series 29. *Comprising Routes over Leith Hill and between Dorking and Horsham.* 4¼ inches × 5½ inches. 72 pages. With 28 illustrations. R. E. Taylor and Son. Price 1s. net.

Mr. Walker Miles must surely be answerable for some considerable proportion of that vastly increased body of pedestrians met with nowadays wisely enjoying our country walks near London. We have often expressed our belief that as guide-books these pocketable volumes are unequalled ; the illustrations from photographs, mostly by Mr. Alfred Bedding, make them also delightful souvenirs of many a well-remembered ramble. The present instalment deals with ground sacred to the memory of John Evelyn, and familiar to the members of our Field Club ; whilst, in addition to the usual purely topographical matter, it contains notes on the view from Leith Hill Tower, and on the place-name

"Friday Street." It is most remarkable that between Dorking and Horsham no less than four places bear this name, and, by the courtesy of the publishers, we are able to reproduce here the views of these four places. Several letters on the subject of this name have recently appeared in the *Croydon Advertiser*, "Frithway Street" and "Friday's (that is 'Frea's') tree" being among the etymologies suggested. Mr. Walker Miles invites further comments on a question he does not consider as settled; and as our contribution to the discussion

From a Photo by Alfred Bedding.]

BEECH AVENUE AT THE ROOKERY, NEAR DORKING.
(From "Field-Path Rambles.")

we would remark, (i.) that these places seem always small, detached, woodland hamlets, mostly on clay; (ii.) that "street" is often used for a hamlet detached from a village, as in Gracious Street, Selborne, Epping Street, or Cobham Street, not always on a Roman road; (iii.) that any little strip of paving in front of a row of cottages would be most important in days before drainage, on the clay; and (iv.) that in a recent history of Surrey these place-names, with others derived from Woden and Thor, are held to mark the boundary-lines of territory occupied by the heathen (and rural) English in their slowly advancing war of occupation against the Christian (and town-loving) Romanised Briton.

FRIDAY STREET, NEAR WOTTON, SURREY.

FRIDAY STREET, OCKLEY GREEN, SURREY.

FRIDAY STREET, NEAR KINGSFOLD, SUSSEX.

FRIDAY STREET, WARNHAM, SUSSEX.

Rural Studies Series. No. 9. Pasture and Meadow Analysis. By the Rev. E. Adrian Woodruffe-Peacock. 5½ inches × 8½ inches. 19 pages. Louth: J. W. Goulding and Son. Price 1s., post free.

This is a lecture, at once scientifically thorough and practically clear, on the application of rock-soil analysis to the flora of grasslands. It is, therefore, a description of the use of that ecological method of study to which the little book by Professor Henslow reviewed above is an introduction.

British Trees (natural figures), and British Trees (natural figures of boles). From Photographs taken by Francis George Heath. Two Sets of Six Post-cards. 3½ inches × 5½ inches. Country Press. Price 6d. each set.

These are excellent reproductions of photographs of isolated specimens of the Linden, Elm, Oriental and "London" Planes, and "Black" and Grey Poplars. Most of them appear to have been taken at Kew, so neither Linden nor Elm is allowed to exhibit its characteristic "fringe" of shoots round the base of the bole. We doubt the wisdom of styling the "London" Plane (*Platanus acerifolia*) "Western"; and most probably the "Black" Poplar represented is not *Populus nigra.*

Anatomie de la tête du Lasius niger. By Charles Janet. 6¼ inches by 9¾ inches. 32 pages. With 5 plates. Limoges, Ducourtieux and Gout; and *Remplacement des Muscles vibrateurs du vol par des colonnes d'adipocytes, chez les Fourmis, après le vol nuptial.* By the same authors. 8¾ inches × 11 inches. 4 pages. With 2 figures. Paris, Comptes rendus, Académie des Sciences.

These two latest instalments of M. Janet's life-long study of ants and other hymenopterous insects are marked by the marvellously minute anatomical detail of his previous publications. His announcement that the fibres of the vibratory muscles in the queen ant are completely replaced after the nuptial flight by adipose tissue, seems to be an extremely important observation in animal metabolism.

Blackie's Nature-Knowledge Diary. Compiled, with notes on Nature Study, by W. Percival Westell. 10¼ inches × 6¼ inches. 64 pages. Blackie and Son. Price 6d. net.

This ruled note-book contains squared pages for a barometric curve, headed "Monthly Weather Chart," for a year, and some twenty-two double pages of seventeen lines each, or about one line *per diem* for a twelvemonth, divided into fifteen vertical columns, headed Date; Barometer; Thermometer; Seaweed; Rainfall; Direction and Velocity of Wind; Locality; Soil, &c.; Ornithology (Birds); Entomology (Insects); Tree and Hedges; Wild Flowers; Farm and Crops; Farmyard; Garden; and General Notes and Observations. Four blank pages—surely too few—are provided "for sketches, diagrams," &c., and

seven for a "Detailed Index of Observations recorded." The publishers offer books as prizes to the children filling in the best diaries, and assuredly such a labour as the daily record of barometer, thermometer, rain-gauge, weathercock and anemometer, to say nothing of the homely hygroscope and all the biological and cultural columns, would deserve a prize. We hope, however, that teachers will try to train the children under their care in the accurate observation of a few facts and in tracing the connection between them, such as the early or late development of living beings in response to climatic variation, rather than in the unintelligent accumulation of isolated items.

Epsom College Natural History Society. Report for 1906. No. 18. 5½ inches × 8½ inches. 84 pages. With illustrations. Epsom: L. W. Andrews and Son. Price 1s. 6d.

This annual report maintains its excellent repute. In addition to the usual lists of first flowering, birds' nesting, insects captured, weights and measures of the boys, and weather records, it contains an excellent illustrated paper on the fossils of Herne Bay, and several good local photographs. *Campanula Rapunculus*, which we, too, have seen near Stoke d'Abernon, may be an escape from ancient cultivation.

Pictorial Landscape Photography. By J. C. Warburg. 5 inches × 7½ inches. 50 pages. Illustrated. Offices of *Focus*. Price 6d. net.

This is, as it professes to be, a thoroughly matter-of-fact practical manual, while the fine specimens of the author's own work which it includes, prove that he knows what he is writing about.

The Photographic Monthly for April contains six photographs of the young cuckoo from one to eleven days old, with Mr. J. Peat Millar's description of how they were obtained.

Potatoes. By the Hon. H. A. Stanhope. 5½ inches × 8½ inches. 20 pages. Agricultural and Horticultural Association. Price one penny.

One of the excellent series of "One and All" garden handbooks, edited by Edward Owen Greening, F.R.H.S. The author gives very interesting details of the history of the popular tuber; the best modes of cultivation; the treatment for diseases; the varieties suitable for different kinds of land; and the book is very fully illustrated throughout, having, among other blocks, a copy of the woodcut in Gerard's Herbal.

What are We? By Leonard Joseph. 7 inches × 10 inches. 394 pages. Illustrated. Kegan Paul, Trench, Trübner and Co. Price 15s. net.

In this volume Mr. Joseph has mapped out "his former rambling theories on paper," and at the same time has given us a multitude of facts and theories which he proceeds to consider. In some cases he appears not to have quite grasped the intention of the quotations from the writings of biologists with which he finds fault, and the deductions from his own experiments are not awlays absolutely sound. Our space does not permit us to discuss Mr. Joseph's philosophy in detail, but we may briefly outline his intentions. His first endeavour is to show that the German School of Philosophy is wrong, and that the world is real, and not merely a conception. Next he sets himself to show that the world has a purpose, and is not a thing of chance. He devotes some seventy pages to outlining all that is known about life. He claims that there is no cosmic intelligence or consciousness; that thought is a mechanical process, and while there is a purpose in everything, everything is not done purposely. He points out a new psychological aspect of "will," and his standpoint is that the force, of which we are a part, is eternal but ever changeable, and therefore life will die out, as will also intelligence and matter itself, although motion remains.

Received: *Bulletin of the New York Botanical Garden*, vol. 5, No. 16; *Descriptive Guide; Bird Notes and News*, vol. 2, No. 5, Spring No., 1907; *The Museum Gazette*, *The American Botanist*, and *The Victorian Naturalist* for March; *Bird-Lore* for March and April; and *The Naturalist*, *The Irish Naturalist*, *The Animal World*, *The Animals' Friend*, *The Humanitarian*, *Knowledge*, *The Agricultural Economist*, *The Estate Magazine* and *Progress*, for April.

NATURAL HISTORY NOTES.

482. A Holiday Note.—Clear skies and bright sunshine contributed largely to the enjoyment of a country walk on Easter Monday. Through field-path and lane a very pleasant journey was made from Waltham Abbey to Copthall. Along the route it was noticed that the hawthorn hedges with their partial covering of new leaves were almost ready to open their buds of white blossom, and beneath the hedgerows patches of the pale wild violet flowered. Two small tortoiseshell and a brimstone (*Gonepteryx rhamni*) butterfly were out enjoying the sunny day, but the latter is one of the common varieties usually seen in the woods at this time. In many places nests of the blackbird and thrush were ready for the eggs, and in close proximity to these were several of last year's nests, some filled with dried leaves while others presented a very bedraggled appearance. The only sight one regretted to see was the drastic trimming which the hedgerows had received.

37, *Alwyne Villas, Canonbury.* CHAS. E. J. HANNETT.
April 2.

483. Do Dogs eat Carrion?—In his "Descent of Man" Darwin says: "It is well known that dogs, though they will not eat carrion, sniff and roll in it." Does not this statement require qualification? The dictionary defines carrion as dead and putrefying flesh." My retriever often picks up and eats the remains of hares and rabbits that have been dead some time. One day he was very pleased with a lamb that was decidedly "high." On another occasion one that was far "higher," and reduced to a skeleton by decomposition, was eaten. Darwin, however, is far too accurate an observer to be easily caught tripping, and the solution may be this. There is carrion and carrion. A dog will eat a carcase in its first and last stages of decomposition, but not when it is given over to the larvæ of the blow-fly. Most of us have had experience of our dogs rolling in any garbage they come across. Some dogs roll on toads and frogs whether alive or dead.

South-acre, Swaffham. EDMUND THOMAS DAUBENY.

484. Goldfinches.—It may interest the Selborne Society to know the Goldfinches came back again this year at the beginning of March to their feeding ground. I noticed nine goldfinches resting on the tree before my window. They seemed to wait just long enough to see the place was clear for them, when off they flew to the piece of spare ground just opposite, where they fed for about two or three hours, then left altogether, as they came flying in the direction of Kensington Gardens, repeating their visit every morning about the same time; but now I notice only four birds are left, so suppose the food is getting scarce. I like to watch these pretty goldfinches.

37, *Iverna Gardens, Kensington, W.* F. MACKENZIE.

485. Birds and Wire Netting.—In many gardens a space is enclosed with wire netting to protect fruit trees from the attacks of birds. Some persons think that a portion of the netting should be removed at certain times of the year so as to admit birds to combat insect pests. This is not necessary for small fruit. It should be remembered that parasites, such as the different ichneumon flies, keep down most insects far more effectually than any bird. Those that cause the greatest damage to currants and gooseberries are the gooseberry moth (*Abraxas grossulariata*), and a saw-fly (*Nematus grossalariæ*), the larvæ of which are so nauseous that few, if any, birds will touch them. It is, however, thought by some that Cuckoos eat the saw-fly caterpillar. Whether this be true or not I cannot positively say from my own observation. At times, these saw-fly larvæ (which are easily seen) have stripped currants and gooseberry bushes unprotected by wire netting, in spite of the Cuckoos that were on my premises every day. Strawberries and raspberries are not attacked by insects in a way that requires the help of birds at any time. Plum trees are seldom enclosed in wire netting owing to their height, and they are liable to the attacks of numerous insects that form a favourite food for most little birds. In many gardens it is difficult to save the buds of plum and greengage trees from Bullfinches in winter and the early Spring; and from Blackbirds when the fruit is ripe. If they are enclosed in wire netting, a mesh might be used that would admit only little insect-eating birds.

A great many kinds of insects prey upon our pear and apple trees, and to these birds should be allowed free access.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

486. Finches and Scotch Firs.—One afternoon at the end of March I saw the following finches all engaged at the same time in feeding on the seeds in the cones of a Scotch Fir in my garden :—Common Crossbill, Sparrow, Goldfinch, Greenfinch, Chaffinch.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

487. Little Owl.—A friend writes to me from the neighbourhood of Thetford to say : "I had a stroke of luck the other day—on some elder bushes I saw a Little Owl hanging, which had been dead a day, and luckily was dry, so I sent it off to the stuffers. I do not know who the idiot was who killed it, and regret its death, but am glad its corpse was not altogether wasted." These birds have been seen by several persons in this locality. One of the keepers informed me he had just seen a pair in a copse close here. On my expressing a hope that he had not shot them, he replied that he "did not kill those kinds of birds." The education of that bullet-headed race of mankind is beginning to look up.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

488. The Fairy Martins.—The last sentence of the penultimate paragraph of Mr. Dove's letter on p. 4 is a good instance of the tendency among human beings to attribute human reasoning powers and motives to the lower orders of creation. As a matter of fact, the placing of their nests in the most inaccessible positions by the birds in question is not by any means a proof of their possessing any reasoning power, because the same result could have been achieved in the ordinary course of nature by the process called "natural selection." When the birds first commenced to build their nests on the cliff, those which happened to choose the positions of greatest safety would be most successful in surviving and rearing their young. They would most likely choose similar positions every time, and their descendants would have an inherited tendency to do so; hence, in time, a race would be developed which built nests only in the best protected places without any help from reasoning powers at all.

Hale End, Chingford. C. NICHOLSON.

489. Plant Freaks.—With regard to plant-freaks, I think the most extraordinary I have ever seen was that of the common daisy (*Bellis perennis*). I have not the plant by me now, but I will give you as short and as accurate a description of it as possible. The plant was a small one, but it had one flower-stalk about 8 inches long, and on the top of this was the flower. This curious structure was like the usual flower in shape, but the ray-florets had apparently been mostly used to form ten little stalks about $1\frac{1}{4}$ inches long, and bearing on the top a minute daisy flower certainly not more than $\frac{1}{10}$ inch in diameter.

O. C. SILVERLOCK.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

Special General Meeting.—At a Special General Meeting held on April 23, the suggestions made by the Council in connection with the revision of the Rules were adopted. The procedure at the Annual General Meeting has been modified, and it has been decided that the names of those recommended by the Council for election as President, Trustees, Vice-Presidents, and Councillors must now be announced in NATURE NOTES, and a list of them will be found under the heading of "Annual Meeting" at the end of the Magazine.

All new members must now be elected by the Council after nomination by two members.

New Members.—*Central Society.*—The following members stand for election Henry Austin, Esq.; Mrs. Ball; Mrs. Bramwell; R. Miller Christy,

Esq., F.L.S.; W. H. Daun, Esq.; G. Spurrell Groom, Esq.; Robert Jones, Esq., M.D., F.S.A.; Miss Kilgour, Alexander Payne, Esq.; Henry Perrin, Esq.; William H. Such, Esq.; H. G. Troughton, Esq.; H. J. Troughton, Esq.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Charles Burt, Esq., 10s. 6d.; Alfred Deed, Esq., 10s. 6d.; Mrs. Phillips, 10s. 6d.; Miss F. A. Gordon, 10s.; Lady Jenkyns, 10s.; Thomas Layton, Esq., 10s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of May 21 and June 17, for the purpose of issuing books to members.

EXCURSIONS.

Saturday, March 23.—Seventy-four members met at St. James's Palace. The State apartments were entered from Friary Court, and the members were shown into the Picture Gallery. The Rev. Canon Sheppard, Sub-Dean of the Chapels Royal, acted as cicerone, but first gave an address on the history of the Palace. Originally a hospital dedicated to St. James the Less stood on its site. This was for the reception of fourteen leprous maiden sisters, who were to lead a devout life, "living chastely and honestly in divine service." The hospital was founded before 1100 A.D. In 1838, when enlarging the Chapel Royal, stone mullions and other pieces of masonry of the Norman period were discovered. Later on a brotherhood was attached to the hospital, consisting of eight brethren, of whom six were chaplains.

Edward I. was most rigorous against lepers within the bounds of the city; but for the poor afflicted ones outside the city walls he displayed great consideration, confirming all the previous gifts, and granting, in 1290, the privileges and profits of a fair to be held annually on the eve of St. James's Day (July 25), the day following, and four days after.

Henry VIII., in 1532, purchased the site of this leper hospital, compounded with the leprous maidens, and demolished the old building. In place thereof he built a goodly manor, and annexed to it a park. He named it St. James's, after the hospital originally standing on the site. The plans for the new building are generally supposed to have been prepared by Thomas Cromwell, Earl of Essex, but others state that the plans were furnished by Holbein. The style used was the mixed Gothic, so prevalent in Henry's reign. The external character has been greatly changed by the additions and alterations afterwards made. Noteworthy is the ornamental carving over the three external doors in the clock-tower, where the initials H.R. are still to be seen. The red brick clock-tower itself, with its four octagon towers and picturesque gateway, forms one of the most precious links with the past that London possesses, and yields to no other domestic building in England in the variety and richness of its historical associations. This gateway is represented in the fourth plate of Hogarth's "Rake's Progress." A destructive fire occurred early in 1800, by which many valuable documents stored here were destroyed.

Sieur de la Serre, historiographer of France, gives a favourable description of the place when he came to England in 1638 with Marie de Medicis, mother of the consort of Charles I; but Sir John Fielding in 1776, and Defoe, had a very poor opinion of the Palace as reflecting no honour on the kingdom.

A clock has been in the tower for nearly three centuries. The tower was struck by lightning in 1618. In 1831 the clock was removed, but replaced on a petition being presented to William IV. In 1882 a new one was erected, and in 1894 it was thoroughly overhauled. In 1731 a printing press was set up, and several members of the Royal Family were instructed in the art by Samuel Palmer.

The company next proceeded through the State Apartments, which have only once, in late years, been thrown open to the public, and that was in 1887, during September, October and November, when 431,025 visitors came to see the Jubilee gifts. Sir Christopher Wren designed the cornices and mouldings of these apartments, which are well suited for the holding of levées and other Court functions.

The Guard Room and Armoury Room are at the top of the staircase, and are hung with arms and armour disposed in artistic devices. Next is the Tapestry

Room, formerly the "Old Presence Chamber." The tapestry, representing scenes in the lives of Venus and Mars, was made at Mortlake for Charles I. The fireplace is noteworthy, for on it occur H. and A. [Henry and Anne (Boleyn)] united by a true lover's knot.

Passing on the Members entered the Drawing Room, formerly known as the Great Council Chamber or Presence Chamber, decorated in red. The third State room is the Throne Room, containing fine examples of carving by Grinling Gibbons. At the end is the throne under a canopy made in 1801.

An inspection of the Chapel Royal followed. On passing through the Colour Court entrance into the chapel the ceiling, with its date, 1540, at once attracts attention. The east window has been altered several times. In the vestry the sacramental plate was shown, the two large silver-gilt alms dishes attracting much attention. A hearty vote of thanks was given to the Sub-Dean for acting as guide, and the thanks of the Society are due to the Lord Chamberlain for affording Selbornians the very special privilege of this visit.

Saturday, April 6.—Fourteen members met Mr. Matthew Hunt at Upper Warlingham Station for the first out-door ramble of the season. Through true April weather—shower and sunshine—they took the lane towards Court Farm, thence to Hamsey Green, and from there by field-path and woodway to breezy Farleigh Common. By the wayside *Viola odorata* and *canina* were discovered; *Anemone nemorosa* was abundant; *Ranunculus Ficaria* and *bulbosus*, and the white stars of *Stellaria Holostea*, the yellow primrose and "palm" were all observed, while blue-tits, chaffinches, and a yellow-hammer were among the birds discovered. The guide's dog, "Vic," created some diversion by his water propensities, and the cottage garden of our hostess, Mrs. Smith, was much admired, and quite a long time was spent examining her flowers, fowls, rabbits, bees, home-cured ham and bacon. During the afternoon great interest was aroused by a very fine double rainbow of perfect arches and with full colours, the violet rays being very beautiful. After tea a four-mile walk by field-paths and by-ways brought the ramble to a termination at South Croydon Railway Station.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, May 13.—Publications Committee at 5.30 p.m.
Thursday, May 30.—Annual General Meeting at 8 p.m.
Tuesday, June 25.—Council Meeting at 5.30.

The Annual General Meeting.

The Annual General Meeting will be held at 20, Hanover Square, on Thursday, May 30, at 8 p.m. The Annual Report and Balance Sheet will be presented, and the President, Vice-Presidents and four Councillors elected for the ensuing year.

The following is a list of those recommended by the Council for election:—

As *President*.—The Rt. Hon. Lord Avebury, D.C.L., F.R.S.

As *Vice-Presidents*.—O. V. Aplin, F.L.S.; Professor G. S. Boulger, F.L.S., The Hon. Mrs. R. C. Boyle; The Rt. Hon. James Bryce, M.P.; The Rev. H. E. U. Bull, M.A.; The Rev. R. Ashington Bullen, B.A., F.L.S.; Charles Burt, J.P.; Dudley W. Buxton, M.D.; His Grace the Archbishop of Canterbury; The Hon. Sir John Cockburn, K.C.M.G., M.D.; Alfred T. Craig; J. Shaw Crompton, R.I.; Fred Enock, F.L.S., F.R.M.S.; W. Warde Fowler, M.A.; The Right Hon. Sir Edward Fry; The Most Noble the Marquis of Granby; The Right Hon. Sir Edward Grey, M.P.; The Rev. Professor Henslow, M.A., F.L.S.; Mrs. Arthur Hill; Sir Robert Hunter, M.A.; Sir Harry Johnston, K.C.B.; G. B. Longstaff, M.D.; The Rev. the Hon. Edward Lyttleton, M.A.; A. Holte Macpherson, M.A., B.C.L., F.Z.S.; William Henry Maw, M.I.C.E., F.R.A.S., F.R.M.S.; The Rt. Hon. Lord Montagu of Beaulieu; G. M. Murray, F.R.S., F.L.S.; G. A. Musgrave, F.Z.S., F.R.G.S. (*Founder*); Mrs. G. A. Musgrave (*Founder*); Mrs. Percy Myles; J. L. Otter; Earl Percy, M.P.; Mrs. E. Phillips; W. P. Pycraft, A.L.S., F.Z.S.; The Rev. Canon H. D. Rawnsley, M.A.; The Hon. Lionel Walter Rothschild, Ph.D., M.P.;

R. Bowdler Sharpe, LL.D., F.L.S.; The Rt. Hon. the Earl of Selborne; The Rt. Hon. the Earl of Stamford; R. Marshman Wattson; W. Whitaker, B.A., F.R.S., F.G.S.

As *four Councillors under Rule IX.*: W. Bickerton-Norman Gray, P.A.S.I., T. H. Hiscott, Mrs. McLeod.

The following are the *six Vice-Presidents nominated under Rule VIII.* to serve on the Council: The Rev. H. E. U. Bull, M.A.; J. Shaw Crompton, R.I.; A. Holte Macpherson, M.A., B.C.L., F.Z.S.; Mrs. Percy Myles; W. P. Pycraft, A.L.S., F.Z.S.; W. Whitaker, B.A., F.R.S., F.G.S.

The Election will be by ballot, and it is open to any member to suggest the name of any other person as President, Vice-President or Councillor, or, in the case of Vice-Presidents, the number of whom is not limited, to propose any additional names.

There will also be an election of honorary members nominated by the Council under Rule III.

EXCURSIONS.

Saturday, May 4.—Oaklands, Symonds Hyde and Brocket Hall Park. Train leaves King's Cross (G.N.R.) at 2.30 p.m., Finsbury Park at 2.36. Take cheap half-day excursion tickets to St. Albans, 2s., but detrain at Hill End Station at 3.24 p.m. *Change at Hatfield.* Walking distance about seven miles. Tea at "The Chequers," Cromer Hyde. The return train reaches King's Cross at 9.15 p.m. Guide, Mr. W. Percival Westell, F.L.S.

Saturday, May 11.—Bookham Common and Leatherhead. Meet at Bookham Station at 2.56 p.m. Train leaves Waterloo (L. & S.W.R., South Station) at 2.7 p.m. Return excursion fare, 2s. Guide, Miss Giberne.

Saturday, May 18.—No excursion on account of the Whitsuntide holiday.

Saturday, May 25.—Pinner and neighbourhood. Take return tickets to Pinner, 1s. 3d. Trains leave Baker Street (Met. R.) at 1.55 and Marylebone (G.C.R.) at 2.15 p.m. Tea at the "George Inn," Ruislip. Total walking distance 6½ miles. Guide, Mr. Ernest A. Nash.

Saturday, June 1.—Marden Park and Oxted. Meet at Woldingham Station (L.B. & S.C.R.) at 3.23 p.m. Return fare, 2s. 5d. Trains from Victoria at 2.30, Clapham Junction at 2.37, and London Bridge at 2.25 p.m. Walk across Marden Park and through Woods to Oxted. Tea at A. Lenton's Dairy, High Street, or Carpenter, Baker, High Street, Oxted. Return from Oxted at 6.45 or 7.24 by paying excess to Woldingham, 4d. Guide, Mr. C. M. Mühlberg.

N.B.—Those members who wish to avail themselves of the cheaper fare and later train from London Bridge at 2.55 can join the party by keeping to the footpath bordering the left of Marden Park.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee*, at 16, Heathcote Street, W.C.

---

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

CASES FOR BINDING . . NATURE NOTES

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

PRICE 1/1 NET, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd., 83-91, Gt. Titchfield St., London, W.,

They will be pleased to bind same in Cases on receipt of 1/3 net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

CHEAP EDITION OF THE LATE DR. RAVEN'S HISTORY OF SUFFOLK.

In crown 8vo, tastefully printed in old-face type, and bound in cloth, gilt lettered, price 3s. 6d. net.

A POPULAR HISTORY OF SUFFOLK

BY THE LATE

JOHN JAMES RAVEN, D.D., F.S.A.

Author of "The Church Bells of Suffolk."

"The volume is superior to some of its predecessors in literary skill and in fulness of local knowledge."—*Standard.*

"Where all is so good it is difficult to make choice, but the tenth chapter on 'Colleges, Lollards, &c.,' is specially interesting."—*Literary World.*

"Canon Raven has assuredly produced the most readable as well as the most discriminating history of this interesting district that has got itself into print."—*Black & White.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

THE ANIMAL WORLD

ILLUSTRATED.

NEW SERIES, PRICE 2d. MONTHLY.
Annual Subscription, 2s. 6d. post free.

THE *Animal World*, as its title denotes, is an Illustrated Monthly Magazine devoted to matters relating to animal life, but it does not deal with these in a dry-as-dust Natural History manner, but rather records from personal observation the characteristics, qualities and needs of animals of every kind.

For over thirty years the *Animal World* has well maintained its place among the publications devoted to the subject, and recently it has undergone many new changes which have greatly tended to increase its popularity and interest among animal lovers.

Among the features inaugurated for 1907 are, a MONTHLY ANIMAL PHOTOGRAPHIC COMPETITION, AN ANIMAL IDENTIFICATION COMPETITION, PERSONALITIES AT THE ZOO, WELL-KNOWN ANIMAL LOVERS, &c., &c.

A Specimen Copy will be sent gratis on application to—

THE "ANIMAL WORLD" OFFICE,
105, Jermyn Street, London, S.W.

☞ **Athenæum** says:—"This excellent and well-known periodical . . . The articles are all from the pens of authors eminent in their own lines."

PLAINLY WORDED.

KNOWLEDGE & ILLUSTRATED SCIENTIFIC NEWS.

EXACTLY DESCRIBED.

MONTHLY, SIXPENCE NET.

SUBSCRIPTIONS—Yearly 7/6, Half-yearly 4/-. Special for 5 Years, £1 5s.
(All Post Free to any part of the World.)

Contains **up-to-date** articles by the **ABLEST EXPONENTS** in the
VARIOUS BRANCHES OF NATURAL HISTORY & SCIENCE,
Profusely illustrated with full-page Plates, Photo Blocks, and Drawings.

Publishing Office:—27, CHANCERY LANE, LONDON.
OR THROUGH ANY BOOKSELLER.

No. 210. Vol. XVIII. June, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
THE ANNUAL CONVERSAZIONE	101
SELBORNIANA	107
REVIEWS AND EXCHANGES	109
NATURAL HISTORY NOTES.—Fox and Badger.—Otter and Salmon.—Tits.—Great Tit.—Redstart.—Where Birds Nest.—Pythons.—Wasps.—Plant Freaks.—Venus'-Comb.—Unlovely Scenery.—Black Rain.—Friday Street	114
NATURAL HISTORY QUERIES.—A Kestrel at Close Quarters.—Wasps.—Bud Destruction	117
ASTRONOMICAL NOTES FOR JUNE, 1907	117
SELBORNE SOCIETY NOTICES	118
ANSWERS TO CORRESPONDENTS	120

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.
CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

Photographic Specialities for Natural History Workers.

GOERZ-ANSCHUTZ

Folding Camera

Will take Photographs of Birds on the Wing.

Speed up to 1/1200th Second.

Shutter Almost Noiseless.

Best for Definition.

CAN BE SEPARATED.

Single Combination is an admirable Long Focus Lens.

GOERZ . . . . TELEPHOTO . ATTACHMENT.

Gives Large Size Photographs of Timid Birds and Animals from a Distance. Indispensable to Bird Photographers.

The above are used by the well known bird photographer, Mr. Oliver G. Pike.

SEND FOR BOOKLET No. 99 TO—

C. P. GOERZ, 1-6, Holborn Circus, London, E.C.

(Wholesale and Colonial only), or

The STEREOSCOPIC Co., 106 & 108, REGENT STREET, LONDON, W.

ALL RIGHTS RESERVED.]

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 210. JUNE, 1907. VOL. XVIII.

THE ANNUAL CONVERSAZIONE.

THE Annual Conversazione took place at the offices of the Civil Service Commission, on Friday, April 26, and it was the fourth occasion on which the buildings, which formerly were inhabited by the University of London, have been kindly placed at the disposal of the Selborne Society. In spite of the wet weather, between five and six hundred people attended, and in no way did the entertainment fall short of those which have been held in Burlington Gardens.

Among those present were the Earl of Stamford (Vice-President), Lord Avebury, D.C.L., F.R.S. (President), Lady Avebury, the Hon. Walter Rothschild, Ph.D., M.P. (Vice-President), Mrs. Anstruther, the Misses Astbury, Mr. and Mrs. F. Watson Baker, Mr. E. J. Bedford, Mr. E. Bidwell, Miss Bidwell, the Rev. A. B. Blomfield, Mr. Cosmo Blore, Professor Boulger, F.L.S., F.G.S. (Editor of NATURE NOTES), Miss Broderick, Mr. R. H. Burne, B.A., Dr. Dudley Buxton (Chairman of Council), Mr. Leonard Dudley Buxton, Mr. Miller Christy, F.L.S. (President of the Essex Field Club), Mr. Alfred Heneage Cocks, M.A., F.S.A., F.Z.S., Mrs. Shaw Crompton, Miss Ethel Crompton, Mr. J. A. Curtis, Mr. J. F. Davie, Mr. Fred Enock, F.L.S., F.E.S., and Mrs. Enock, Mrs. and Miss Eyton-Jones, Mr. and Mrs. F. G. Fenton, Miss Flint, Mr. Bernard Gibson, Mr. C. H. Goode, Mr. and Mrs. Benjamin Gott, Mr. Wintour F. Gwinnell, F.G.S., Mrs. W. Gwinnell, Mr. and Mrs. Ernst Hartert, Mr. F. W. Hewitt-Ketley, Mr. John Hopkinson, F.L.S. (Honorary Secretary of the Ray Society), the Rev. Canon Horsley, M.A., the Rev. W. C. Howell, Mr. and Mrs. Matthew Hunt, the Rev. H. N. Hutchinson, B.A., F.G.S., Mrs. H. N. Hutchinson, Mr. and Mrs. L. Kamm, Mr. and Mrs. A. S. Kennard, Miss Latham, Mdlle. Marie Léon, Mrs. McKay, Miss Dorothy Meihé, Mr., Mrs. and the Misses Mühlberg, Mrs. Percy Myles, Mr. and

Mrs. E. A. Nash, Mr. E. T. Newton, F.R.S., Mr. Milton Offord, Mr. G. K. Paley, Mr. Robert Paulson, Mr. P. Payne, Mr. Hubert H. Poole (Honorary Librarian), Mrs. H. W. Ravenshaw, Mr. F. W. Rudler, I.S.O., F.G.S., Councillor and Mrs. Satchwell, Miss Florence Saunders, Mr. A. Forbes Sieveking, F.S.A., Mr. G. W. Simmons, Councillor and Mrs. H. W. Simpson, Mr. and Mrs. C. D. Soar, Miss Tench, Mr., Mrs. and Miss Castle Turner, Mr. Harry J. Veitch, F.L.S., Mrs. Veitch, Mr. and Mrs. Edric Vredenberg, Mr. and Mrs. James Walker, Mr. John J. Ward, Mr. and Mrs. R. Marshman Wattson, Mr. C. O. Waterhouse, Miss Waterhouse, Mr. Wilfred Mark Webb, F.L.S. (Honorary Secretary), Mrs. Wilfred Mark Webb, Miss Wilson, Commander Wilson Barker, R.N., Miss Wood, Mrs. Woodhouse, Mr. George W. Young.

At 8 p.m. a lecture on "Bird Architecture" was given in the Theatre by Mr. E. J. Bedford, who was one of the first naturalists to use photography for the representation of birds and their nests. Dr. Dudley Buxton (Chairman of Council) presided and introduced the lecturer. Among the photographs of nests shown by Mr. Bedford were those of the Song Thrush and Blackbird, the latter containing eight eggs (which all hatched out but one), and a series of a Nightingale showing the "site," bird on nest, eggs, and young. The lecturer explained that he always endeavoured to obtain at least two views of the same nest, the "site" and a nearer view showing eggs, &c. Several examples of Robins' nests, one bird building three times in the same school-room at Crawley Down, Sussex, twice in the folds of a curtain, and once upon the books in the school library, were shown; a Chiffchaff's nest containing Cuckoo's egg, and a picture of a young Cuckoo, a fortnight old. A Pheasant sitting on her nest showed the protective colouration afforded by Nature, and was very difficult to discover until pointed out. A photograph of several nests of the Sand-martin was shown, and the lecturer stated that the owner of the sand-pit being obliged to disturb a portion of it, arrangements were made to obtain the photographs shown. Other subjects were Magpie, Nightjar, Lapwing, Swallow, Terns, and views of the "Pinnacles" Eider duck, Guillemots, and Cormorants at the Farne Islands, young Bullfinches, several examples of Wrens which the lecturer put forward as an argument in favour of birds exercising reasoning power in the selection of material to match the position chosen for the nest, another similar instance being some Rooks' nests built under one another, their previous nests being blown down in a gale, the one under which they built the second time, having remained firm. Common House-Sparrows' nests were shown under the plumes of a Field Marshal's hat, belonging to a London statue; and the series was concluded with the nests, eggs and young of the Mute Swan, together with the adult birds.

A vote of thanks to Mr. Bedford was proposed by the Earl

of Stamford and carried with acclamation. Mr. Bedford briefly replied.

After a short interval, Lord Avebury delivered his Presidential Address, which has already appeared in NATURE NOTES (May, 1907, pp. 81 to 85).

The Hon. Walter Rothschild, Ph.D., M.P., proposed a very hearty vote of thanks to Lord Avebury, and said that he did so with much pleasure as he was one who had been interested in Natural History all his life. Professor Boulger seconded the motion, which was enthusiastically received and passed unanimously.

As on previous occasions, Mr. Wilfred Mark Webb (Honorary Secretary) proposed, and Mr. C. M. Mühlberg seconded, a vote of thanks to the First Commissioner of His Majesty's Office of Works and to the Civil Service Commission, for the use of the buildings. Lord Avebury then proposed a vote of thanks to the Chairman of Council, Dr. Dudley Buxton, the Council, and to the Honorary Secretary, which was seconded by the Earl of Stamford.

Dr. Dudley Buxton replied as follows: The success of the Society was due to the individual efforts of its members. The control of the Society's affairs rested with the Council, and his personal endeavours to promote the well-being of the Selborne Society owed any fruition which there might have been to the loyal help accorded him by the members of Council, whether elected by the central body or serving as delegates from branches. The success of the Conversazione—and he was glad to say it was a great success—was due to the Hon. Secretary, Mr. Wilfred Mark Webb, and those who had worked with him. Few could realise how much labour was necessary to achieve success, and he was glad to tell Mr. Webb how much his work was appreciated. The opportunity served to remind those who were present, whether they were members or not, that the Selborne Society was a very living society, which has undertaken important work in the past—how important was evidenced by the fact that many, if not all, its aims and lines of work had so attracted Nature-lovers that they had initiated fresh societies, whose aim was to specialise in some one direction. The National Trust and the Birds' Preservation Society were cases in point. But the Selborne Society was not content to leave her work to others or to live upon achievements of bygone years. It was recognised by the Council that although much valuable work had been done by the Selborne Society in the past, there yet remained much more to be attempted and carried out in the future. Pleasant and useful as were the social side of the Society's work—Conversazione, Lectures, and Social Gatherings, there was a definite strenuous labour for the Selborne Society to perform, if it was to remain true to itself and carry out the objects which appeared in its rules, as the *raison d'être* of its existence. To do this, the Council appealed to the members of the Society to be loyal to the work and to help the Council. Without such help the efforts

of the executive for progress and advance must be restricted. Such help could be tendered in two ways—personal effort and support, and by inducing friends to become members of the Society. Each member was a centre of a circle of influence, and it was this influence which the Selborne Society wanted and would attain if every member determined to help. The cause was too good to need more pleading, he would leave it to all who were Selbornians in fact and not in name only.

As on previous occasions, microscopes were exhibited in the South-west Hall by the Fellows of the Royal Microscopical Society, Members of the Quekett Club, North London Natural History Society, the Selborne Society, and others, as follows: Messrs. Sydney C. Akehurst, Henry Austin, R. and J. Beck, T. N. Cox, T. D. Ersser, H. E. Freeman, E. C. Goulton, Alfred E. Hilton, Ernest Hinton, the Rev. H. N. Hutchinson, Messrs. Richard T. Lewis, B. T. Lowne, K. I. Marks, Milton Offord, H. Palmer, Max Poser, Charles F. Rousselet, G. W. Simmons, A. Smith, T. J. Smith, Chas. D. Soar, J. S. Soul, Alfred W. Stokes, C. H. Stokes. G. A. Stokes, H. Taverner, W. R. Traviss, Charles Turner, J. Walker, W. Watson and Sons, John C. Webb, C. O. Whiting.

Among the exhibits were three connected with Gilbert White. In the first place, members had the pleasure of seeing the original manuscript of "The Natural History of Selborne," which was kindly lent by the owner, Mr. Stuart M. Samuel, M.P. Lord Stamford contributed the original letters of John Mulso to Gilbert White, which have been recently published; and printed copies of the book, which was edited by Mr. Rashleigh Holt White, were also on view. The third exhibit consisted of a first edition of "The Natural History of Selborne," which was shown with the others that have been collected by the Society.

Perhaps the Natural History exhibit which attracted most attention was a cat nursing some young squirrels, which Mr. Alfred Heneage Cocks, M.A., F.S.A., F.Z.S., brought up to London on purpose for the Soirée. The cat herself was interesting, because she had in her the blood of a wild cat and of the Abyssinian cat.

The British South African Company showed a number of Natural History specimens and a series of native curios. From Eton College Museum came a number of spurs and claws from the wings and feet of birds, with descriptive labels. The Hon. Walter Rothschild sent a number of handsome insects illustrating variation, protective resemblance and mimicry. Messrs. Watkins and Doncaster had on view a series illustrating the same points, and Mr. Goulton's specimens of living caterpillars served once more to bring protective resemblance forward.

The Rev. Canon Horsley, M.A., brought a number of shells with him; but unfortuuately, Mr. G. B. Sowerby, who usually spends considerable trouble in describing shells to those present, was prevented by illness from attending. Mrs. McKay's contri-

bution consisted of skulls of carnivorous animals, and hippopotamus ivory.

The "Trap-door" spiders' nests from Brazil came from the collection of Commander Wilson-Barker, R.N., F.R.S.E. Some birds stuffed by Messrs. Rowland Ward were very effective. The birds' eggs shown by Mr. Rosenberg, F.Z.S., were most attractive, as were the ants' nests sent by Messrs. A. W. Gamage, Ltd. Included in Messrs. Edward Gerrard and Sons' exhibit were some exceedingly fine skeletons of large frogs. Mr. Peter Lawson, F.R.M.S., showed a curious cameo, and Mr. B. T. Lowne one of his interesting miniature bogs with golden saxifrage in bloom. Botanical models were on Messrs. Watsons' table. Mr. Ernest Swain sent a piece of timber which had decayed in the centre, leaving the branches. Not the least interesting was the host of moths caught during the years 1906 and 1907 in Kew Gardens. In order that these might be exhibited, Mr. A. Langley Simmons made a journey from Southampton.

Among the lantern slides a number of coots and great crested grebes by Miss E. L. Turner may be mentioned, while Messrs. Newton and Co. arranged several series in a large frame. Natural History pictures were not numerous, Mr. Stanley C. Bailey, F.G.S., contributed some books of botanical studies, and a number of coloured drawings of water-mites by Mr. Charles D. Soar were on a screen. Mr. E. J. Bedford's life-like paintings of insects were sent at the instance of Mr. Percival Westell, F.L.S. A selection of original drawings made by Mr. W. J. Webb, to illustrate "The Principles of Horticulture," written by the Secretary of the Selborne Society, came from Messrs. Blackie and Son. Among the stereographs sent by Mr. Cherry Kearton was one of a Raven taken in Wales on April 25, the day before the Soireé, and printed in the train on the way to London on the day on which it was exhibited.

Other exhibitors of photographs were Messrs. Goode, Goulton, and Perrin. Mr. John J. Ward's pictures showed the story of a landscape during twelve months. Cloud photographs were shown by Mr. J. A. Curtis, and Commander Wilson-Barker, R.N., F.R.S.E. Among Mr. William Lawrence's series was a picture of the Selborne Society at Iver Water Splash.

The following is a list of the Geological and Mineralogical exhibits: Interesting Fossils and Minerals from the Chalk, Mr. G. E. Dibley, F.G.S. Fossils from the Upper, Middle and Lower Devonian of the Ardennes, the Eifel, and Britanny, including Cephalopods, Brachipods, Crinoids, Corals and Trilobites, Mr. James Francis, F.G.S. Portsea Marble and Granite, Mr. W. W. Golding. Fossil Reptiles, Mr. W. F. Gwinnell. Models of Famous Diamonds, drawings of Rock Sections, the Rev. H. N. Hutchinson, B.A., F.G.S. Fossil Ammonites from the Lias, Mr. Thos. W. Reader, F.G.S. Specimens of Calcites, Fluorites, Quartz, Ores and Corals, Mr. G. H. Richards. Precious

Stones and Gems, Mr. Bristow J. Tully, F.G.S. Fossils in Limestone, Nummulites, Oolites, &c., Messrs. W. Watson and Sons.

A very large series of specimens showing the art of savage and civilised people was one of the features of the exhibition, and was arranged by Mr. W. O. Oldman. Other contributors to the Ethnological Section, besides those already mentioned, were Mrs. Bramwell, Mr. W. F. H. Rosenberg, F.Z.S., who had some interesting spoons to show, Mr. Rowland Ward, who sent native weapons, and Mr. F. W. Rudler, I.S.O., F.G.S., whose specimens were not only interesting but exceedingly handsome.

Mr. E. E. Bidwell showed and described his unique collection of lucifer matches. Lady Dorothy Neville sent iron work. Mr. Lawrence's specimens included an interesting kettle-tipper. Stone implements from Harlyn Bay, from El Arish, and from Spain were brought by the Rev. R. Ashington Bullen, B.A., F.L.S. The Essex straw-plaiting industry, now extinct, was illustrated by Mr. Miller Christy, F.L.S., and other archæological exhibits came from Messrs. F. G. Fenton, W. W. Golding, K. W. Mumford, F. W. Reader, and the Honorary Secretary.

Mr. T. Ernest Waltham has made several improvements in his method of colour-photography since last year, and showed a series of very beautiful stereographs.

There was always a crowd anxious to see the X-ray and high-frequency apparatus, exhibited by Messrs. H. W. Cox; the Rev. H. N. Hutchinson, B.A., F.G.S., was kept busy with his compound pendulum; and Messrs. Negretti and Zambra showed a fine series of apparatus. Mr. J. A. Curtis had borrowed instruments used in balloons, and Mr. Richard Inwards brought some simple hygroscopes made from wild oats.

An illustrated account of the Brent Valley Bird Sanctuary was on view; and Nature-Study postcards came from the "Country Press," and also from Mr. Walter Dannett, F.G.S.

Copies of teachers' leaflets and pamphlets were exhibited by Mr. Frederick Oldman on behalf of the Agricultural Education Committee, and prospectuses of the Selborne Society, of the League of the Empire Federal Conference on Education, and the Woolwich Congress of the South-Eastern Union of Scientific Societies, were put on a table for distribution. The last-mentioned Congress takes place from June 12 to 15, and may be attended by any member of the Selborne Society on payment of a reduced fee, namely, 2s. 6d. The Secretary is the Rev. R. Ashington Bullen, B.A., F.L.S., of Englemoor, Woking.

The thanks of the Society are specially due to Mrs. McKay, to Mr. H. H. Poole and Mr. Bernard Weaver, for the help which they gave in the arrangement of the exhibits. The following also kindly assisted in the capacity of stewards on the Conversazione night: Professor Boulger, Dr. Dudley Buxton, Mr. J. F. Davie, Mr. and Mrs. Lawrence, Miss Lawrence, Mr. C.

M. Mühlberg, Mr. E. A. Nash, Mr. H. H. Poole, Mr. J. Walker, Mr. R. Marshman Wattson, Mr. Bernard Weaver, and Mrs. Wilfred Mark Webb.

The performance of music by Mr. Franz Zeidler's Bijou Orchestra was much appreciated; the grand piano was kindly lent by Messrs. J. J. Hopkinson. The glass cases were provided by the courtesy of Messrs. Dormer and Humphries, while the refreshments, supplied by Messrs. Moon, Field and Co., were admirably served and met with general approval.

The following ladies and gentlemen formed the Conversazione Committee: Mrs. Percy Myles, Professor Boulger, Dr. Dudley Buxton, Messrs. J. Shaw Crompton, R.I., J. F. Davie, C. M. Mühlberg, E. A. Nash, H. H. Poole, J. Walker and the Honorary Secretary.

SELBORNIANA.

MURDEROUS MILLINERY.—The Spring number of *Bird Notes and News*, the official organ of the Royal Society for the Protection of Birds, presents its readers with the returns of six plume-sales held at the Commercial Sale-rooms, Mincing Lane, in 1906. According to the Society's publication the numbers catalogued of Birds-of-Paradise and of packages of "Osprey" feathers were as follows:—

	Osprey Feathers Packages.	Birds-of-Paradise.
February	327 ...	8,508
April	260 ...	7,188
June	289 ...	11,841
August	242 ...	3,948
October	485 ...	5,700
December	265 ...	3,600

The returns are not pleasant reading for the bird protector. We are told that, "apart from Egrets, Herons and Birds-of-Paradise, the notable features of the sales were the enormous numbers of Sea-Swallows (Terns) and Kingfishers on sale, and the growing consignments of quill-feathers from Eagles, Buzzards, Pelicans, Albatrosses, Swans, and other birds. Ladies are usually under the impression that a 'quill' must be a harmless ornament obtained from the farmyard. The trade in quill-feathers was even more remarkable at the first sale held on February 12 of the present year, when one firm alone catalogued some 15,000 of Albatross quill-feathers, and also a very large number of 'Osprey-wing quills,' while another feature was the 7,000 heads and crests of the Crowned Pigeon on the market."

It is needless to make any comment on these discreditable facts, and one can only appeal to the gentler sex to refrain from wearing such ornaments of beauty which necessitate the killing and final extermination of some of the most rare and beautiful birds.

LIVERPOOL KYRLE SOCIETY. FLOWER BRANCH.—Some years ago a manager of an elementary school in an insanitary and squalid neighbourhood of Liverpool was struck by the fact that the children attending this school could have little real knowledge of plants and other natural objects, because they so rarely had any first-hand experience of them.

It seemed as if the boys and girls who, through the agency of the Country Holiday Fund, were annually benefited in health and happiness by their three weeks' stay in the country, missed something of the æsthetic and educational value the visit might have proved had they been better prepared in heart and mind to listen and learn from old Mother Nature herself. Therefore, when an opportunity arose to promote and encourage Nature-teaching in our elementary schools by obtaining for the teachers the fresh material for illustration which they had been unable to get and had much missed before, this manager and others who understood the circumstances were eager to take the matter up.

Working on the lines of the London Flower Fund, the Liverpool Kyrle Society started a branch, just five years ago, to organise the distribution of flowers, leaves, ferns, mosses, &c., to the city schools. This venture met with the hearty support of a few sympathisers in the country; and, from a small band of workers who helped us during the first season, we have now increased to a fair number of regular contributors.

Fully as we appreciate the fact that this bringing of "bits of Nature" into the schoolroom can never take the place of the richer and fuller sense-experience which contact with the out-of-doors world would bring, keenly as we realise that the knowledge gained indoors can only be second best, strongly as we deprecate any wanton destruction in order to procure specimens, we still have a deep sense of the importance and humanising effect of the study of freshly gathered material.

The boxes are sent to Council, voluntary, "special" and industrial schools, where they are much appreciated.

The flowers are greatly valued for the sake of their beauty, and much pride is taken by the children in arranging them to the best advantage. They are also used for botany lessons, then as models for painting and clay work and as a basis for conversation classes.

The flowers are sometimes given to the children, who treasure them at home for many days afterwards. A friend, visiting a dingy court one day, was shown a daisy plant in a saucer, which was considered a most precious possession by the small owner.

We can hardly estimate the value of the work this branch is doing among children, to whom all blue flowers are bluebells, and all yellow flowers are buttercups. When even the petals of kingcups are cherished, and it is considered a pleasure to be allowed to merely hold one, what joy it must be to see a big bunch with its glory of green and gold.

The country workers are from all parts of the British Isles,

and they are most kind in sending regular supplies to their particular schools. They feel repaid for the trouble they have taken by the children's progress in the knowledge and love of Nature. There are still more workers wanted; at least a dozen schools are patiently waiting till some kind friend will undertake to forward them (in boxes) "bits of Nature" suitable for packing, which otherwise many of the children never have a chance of seeing.

This work is most suitable for boys and girls, for they would not only be giving pleasure to children in most unfavourable surroundings, but it would also be of profit to themselves.

The Secretary, Miss Jessie Bird, Riversdale Road, Aigburth, Liverpool, will be glad to give any further particulars, and also to receive the names of any willing to become members.

ERRATA.—Our attention has been called to the fact that our Natural History Note No. 489, on Plant Freaks, refers to the same case as that described in Mr. Silverlock's article in our February issue. On p. 100, l. 4, "W. Bickerton-Norman Gray" should read "W. Bickerton, H. Norman Gray."

THANKS. — Mr. W. H. Wells, of the Stoneleigh School, Kenilworth, desires to thank the anonymous donor of three years' back numbers of NATURE NOTES for use in his school.

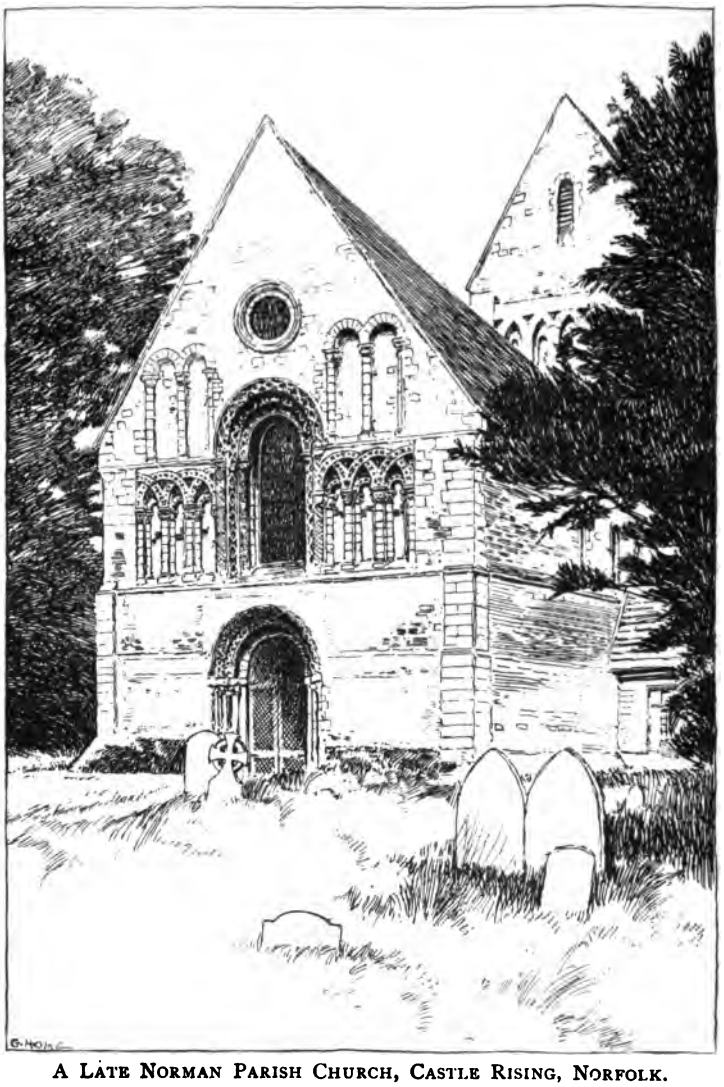
SOUTH-EASTERN UNION OF SCIENTIFIC SOCIETIES.—Members are reminded that the Annual Congress of this Union, to which our Society is affiliated, takes place at Woolwich on the 12th to 15th instant, beginning with a welcome by the Mayor at the Town Hall at 10.30 a.m. on Wednesday, the 12th, followed by a visit to the Royal Arsenal. Members may become members of this Congress on payment of 2s. 6d., and programmes and further particulars can be obtained from the Hon. Local Secretary, B. C. Polkinghorne, 17, Humber Road, Blackheath, S.E., or tickets may be had from the Hon. Local Treasurer, Mr. Alexander Thomas, Borough Treasurer, Town Hall, Woolwich.

REVIEWS AND EXCHANGES.

Our Homeland Churches and how to Study Them. By Sidney Heath. Pp. 126. 7 inches × 5 inches. 52 Illustrations. Homeland Association. Price 2s. net.

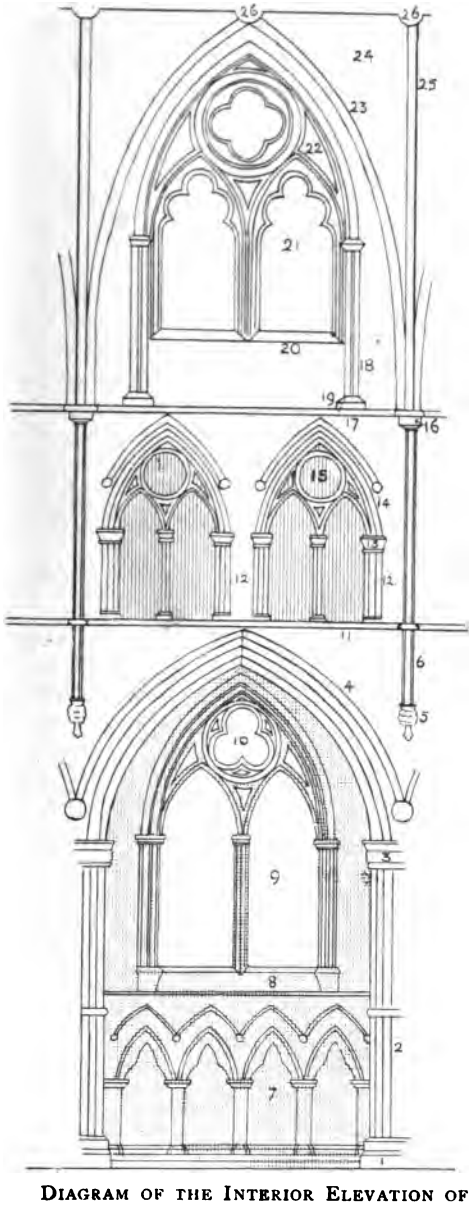
It is certainly an excellent notion on the part of the Homeland Association to supplement the many first-rate local guide-books which they have published by a general handbook to English church architecture at a price within the reach of every student. The work is specially designed for the non-professional amateur, being simply worded, well illustrated, and furnished with a glossary of technical terms and a short bibliography. That the illustrations are at once practical and artistic may be seen from the examples which, by the courtesy of the Association, we are able to reproduce here. The author has carried out the difficult task of selecting and condensing his materials judiciously, though it naturally occurs to another student that other examples might well have been cited. We note, for

example, the absence of reference to the very early work at Bosham, Deerhurst and Breamore, to work perhaps earlier than the Conquest, at Waltham Abbey, to the round bodies of the churches at St. John's, Clerkenwell, and Ludlow Castle, to the stilted arches of St. Bartholomew's, Smithfield, to the fine misereres at



A LATE NORMAN PARISH CHURCH, CASTLE RISING, NORFOLK.
(From "Our Homeland Churches," by kind permission of the Homeland Association.)

Gloucester and Cartmel, to the refectory pulpit at Chester, and to the pillars of the Roman basilica at Uriconium which now serve as fonts in various churches near Wroxeter. We doubt whether the pulpit at Shrewsbury Abbey was originally out of doors, and we should like to see prices and publishers' names added to



KEY.

Clerestory.

26. Boss.
25. Vaulting rib.
24. Vault.
23. Vaulting rib.
22. Tracery of clerestory window.
21. Clerestory window.
20. Sill of clerestory window.
19. Base of jamb, clerestory arch
18. Jamb of clerestory arch.
17. Clerestory string.

Blind Storey (Triforium).

16. Capital of vaulting shaft.
15. Tracery of triforium.
14. Triforium arch.
13. Capital of triforium pier.
12. Pier of triforium.
11. Triforium string.

Ground Storey.

10. Tracery of aisle window.
9. Aisle window.
8. Sill of aisle window.
7. Wall arcade.
6. Vaulting shaft.
5. Corbel.
4. Pier arch.
3. Capital of pier.
2. Pier.
1. Base of pier.

DIAGRAM OF THE INTERIOR ELEVATION OF A BAY OF A CHURCH.
(From "Our Homeland Churches," by kind permission of the Homeland Association.)

the bibliography, where also room might be found for mention of special modern treatises on fonts, misereres, tympana, and even brasses. Only two slips have, however, arrested our attention: Greenstead Church is built of oak and not (p. 35) of chestnut logs; whilst presumably Hawkesmore's work at Oxford, mentioned on p. 76, was at Chicheley's foundation, the College of All Souls.

LEADEN FONT, OF THE LATE NORMAN PERIOD, WALTON-ON-THE-HILL, SURREY.

(From "Our Homeland Churches," by kind permission of the Homeland Association.)

Ightham: The Story of a Kentish Village and its Surroundings. By F. J. Bennett. With contributions by W. J. Lewis Abbott, E. W. Filkins, Benjamin Harrison, J. Russell Larkby, J. Scott Temple and H. J. Osborne White. Pp. viii. and 158. 8½ inches × 6½ inches. Numerous illustrations and a map on the scale of two miles to an inch. Homeland Association. Price 7s. 6d. net.

It may be doubted whether any village as small as Ightham can boast an equal variety of interests alike geological and archæological. Glastonbury, with a British village, a legendary romance and a long monastic glory, is a small town; the cornfields that cover Silchester yield only Roman remains; and even the hill-village of Old Sarum, with a story reaching to 1832, has a shorter record. Ightham undoubtedly deserved a monograph. That it has attracted the attention of the scientific world is owing to the painstaking life-work of a born observer, Benjamin Harrison, whom Mr. Bennett rightly terms the "hero" of his book; and Mr. Harrison's many friends will value this volume, if only for the excellent photograph of him by Mr. Russell Larkby, which forms its frontispiece. In some respects this humble Kentish village suffers for the attention it has attracted. So

great is the interest attaching to its bone-bearing fissures, to its eolithic flint-implements and to the physical geography of their occurrence, that it has necessarily become the centre of much learned controversy, and Mr. Bennett's "story" has become very argumentative and, perhaps, too mainly geological for that flippant person the "general reader." Even the "Walks round Ightham" are those of a geologist: a chapter on the botany of the district was unfortunately not forthcoming; and it has not been the business of any of the contributors to speak of the scenic beauties of the spot. Excellent as are Mr. J. Scott Temple's historical chapters, especially that on "Old Roads," they strike us as too colourless, and we hear too much of manorial records. It is, of course, thoroughly scientific; but surely such a story as that of Cade's rebellion might have been told

KITS COTY HOUSE.

(From] "Ightham," from a photograph by Mr. H. Elgar, by kind permission of the Homeland Association.)

in more exhilarating fashion. Similarly, we feel that Mr. Filkins' account of that gem of English domestic architecture, Ightham Mote, though admirably adapted for the pages of our technical contemporary, *The Builder*, hardly gives an ordinary tourist a notion of the charms in store for him. The editor would seem to have adopted Leslie Stephen's critical canon, "No flowers, by request"; but perhaps we shall be told that it is all the exigencies of space, and that to dilate on Ightham's many graces would have required a far bulkier volume. What we fear is that, while the unscientific tourist may be repelled, the archæologist and geologist may not guess from its title and from the series in which it appears that this is a work which demands their serious attention. Apart altogether from the description of Mr. Lewis Abbott's finds in the fissures and the vindication of the human workmanship of the eoliths, which we naturally expected to find here, the glacial Weald theory of Mr. Abbott, and Mr. Bennett's arguments for the co-operation of surface and subterranean erosion in the making of such gorges as those of Loose and Plaxtole, give the book an importance which is not

merely local. Like all the publications of the Homeland Association, this volume is well printed and illustrated, furnished with a good map, bibliography and index, and neatly bound.

RECEIVED.—*The Victorian Naturalist* and *The American Botanist* for April; and *The Naturalist*, *The Irish Naturalist*, *The Animal World*, *The Animals' Friend*, *The Humanitarian*, *The Agricultural Economist* and *The Estate Magazine* for May.

NATURAL HISTORY NOTES.

490. Fox and Badger.—The mangled remains of two little fox cubs were found lately in the middle of a field in Charnwood Forest. Their being in the middle of the field puzzled us, but it turned out that a vixen was found also dead and mangled near a wood close by, and near to the home of a badger. It would appear that the vixen took possession of the burrow and had her young there and was slain, as well as the cubs, by the rightful owner of the burrow on his or their return; the cubs were, however, carried away to the middle of a field where they were found, much mangled; the vixen was not carried away. The estate on which they were found is not very far from the property formerly owned by a Mr. Ellis, who contributed some articles on badgers to some Natural History papers and is quoted in the "Royal Natural History," vol. ii., p. 86. He says: "Badgers and foxes are not unfriendly"; but the taking possession of the burrow was not an act likely to lead to friendly relations.

W. R. T.

491. Otter and Salmon.—One of my brothers writes from Dartmoor to say: "I witnessed rather an interesting sight, one I shall never see again, I am afraid, not long ago. In the river below my window, at about 2 p.m., I saw an otter working a pool for all he was worth. I went down cautiously and watched, and soon he drove a large salmon into a 'stickle,' and landed it on a boulder where he proceeded to eat it, but on seeing me he soon was off. I got the fish, a spent one of about 14 lbs. A very interesting sight, one which very few have seen in this country, the other being a nocturnal animal. I wished I had had a camera with me. It would have made a rare 'snap shot.' The beast is down there now I fancy, as I saw his tracks a day or two ago."

EDMUND THOS. DAUBENY.

492. Tits.—According to annual custom, my two letter-boxes (one in use, the other superseded) are occupied by two families of Blue Tits, recently hatched out. It is a puzzle what becomes of the egg-shells, which entirely disappear. Do the parents use them for the benefit of their gizzards, or does the cock carry them away? The construction of the nest is a marvel of ingenuity, and curiously large for so small a bird. First there is a foundation about two and a half inches thick of pliable brushwood, completely filling the square box, then comes a layer of moss, and finally, for the reception and incubation of the eggs, a soft and rounded bed composed of donkey's hair, feathers, rabbit's down, and similar materials obtained in the neighbourhood, and notwithstanding all the labour expended by the birds it is very difficult to see them at work. They have no means of going in or out of the box except through the narrow letter-slit.

Buxted, Sussex, A. L. HUSSEY.
May 9, 1907.

493. Great Tit.—It is universally supposed that the Oxeye or Great Tit builds its nest only in holes of trees and holes in other places. But some friends of mine yesterday made an excursion to the neighbourhood of Ruislip, and between the Reservoir and the Wood they found an old Thrush's-nest, and to their great surprise saw an Oxeye Tit in the nest. It flew out and they found five eggs of the Tit in the nest. The nest had been lined by the Tit with rabbit's fur, but underneath that was the smooth turned surface of the inside of the old Thrush's-nest. This seems so singular and extraordinary, that I cannot help thinking that it is worth recording.

Hampstead, PETER HASTIE.
May 21, 1907.

494. Redstart.—I do not know whether it would interest your readers to know that a Redstart has been picked up in London, near the Swiss Cottage. It had died of starvation through the cold. It was taken to Mr. Whiting, and set.

Hampstead, May 20, 1907. PETER HASTIE.

495. Where Birds Nest.—Curious nesting places of birds have been discovered at Hinton St. George, Somerset. In the slaughter-house at Earl Poulett's kennels, a pair of corduroy overalls, used when tarring or painting is being done, had been thrown carelessly over a beam, and in one of the legs a Robin has built and completed its nest. Within a yard of this an old coat had been similarly suspended, and in a tear in the shoulder-lining a Wren has completed a perfectly shaped nest. Notwithstanding that the kennel-man was frequently going in and out, the birds continued their work.—*Standard.*

496. Pythons.—My note (on p. 4) was, of course, intended to remove the doubts expressed by Mr. Daubeny as to the probability of the Ceylon story quoted in vol. xvii., p. 191. I quite agree with him as to the absurdity of the Museum group of which he writes on p. 154. A python usually lies in wait for its prey in a tree, and seizes it by the scruff of the neck, or some other part of the body, so that the victim is not only disconcerted by the sudden attack, but is also powerless to reach its opponent, whose powerful coils are quickly wrapped round the doomed creature. It seems to me that the (proposed) leopard in the Ceylon story would be so swaddled up in the coils of the serpent that its limbs would be rendered useless and the grip on its neck would prevent its teeth being brought into play. It must be borne in mind that a leopard is a considerably smaller animal than a tiger, and that the crushing process to which pythons and other serpents submit their prey is precisely for the purpose of rendering the latter easier to swallow because it is so comparatively large. I may, however, point out, that as the missionary was probably not a naturalist, it may have been one of the smaller "cats" to which he referred, and also, that even if the python did half swallow the beast in question, that is no proof that it was *in the habit* of feeding on such large animals, or even able to swallow them whole.

Hale End, Chingford. C. NICHOLSON.

497. Wasps.—I agree with O. C. Silverlock that wasps probably rarely lose their stings, as bees so often do. The wasp is a predatory insect living on other creatures as well as sweets, and therefore has more occasion to use its sting, which consequently has become a better developed and more perfect instrument than that of the bee, and not so likely to be torn from its body. The bee uses its sting only in defence, of itself or its fellow colonists, whereas the wasp adds to this the use of its sting as an instrument of slaughter in the collection of food material in the shape of caterpillars and flies. As to bees dying as a result of the loss of their sting, I should like to ask, do they? It is a common belief, but has it any foundation in fact? As to the wasp mentioned by your correspondent as not being incommoded but rather advantaged by being snipped in two while feeding on honey, there is no doubt that such a thing is possible and that the wasp would not suffer agony as suggested, because the nervous system of insects is such that pain must be non-existent in them, or at any rate, practically so. The reason why the walking wasp rolled about when snipped in two was doubtless because its balance was disturbed by the loss of its abdomen, but at the same time, I see no reason to doubt that an insect could become so intent on imbibing honey as to be, shall we say, insensible to such an important a matter as that of having its abdomen removed.

Hale End, Chingford. C. NICHOLSON.

498. Plant Freaks.—I have been interested in the various accounts of "Plant Freaks," and having lately found two monstrosities, I think an account of them may perhaps interest other people. The Daisy I found was not a Hen and Chicken variety, but had a fasciated stem, with a common involucre surrounding what would normally have been three capitula. Within a few yards I found a Dandelion with a similar stem, and also a common involucre, but in this case there were only two flower-heads. I find in Kerner's book ("The Natural

History of Plants") he attributes this monstrous growth to the action of Gall-mites. Would it be possible that originally the Hen and Chicken Daisy was produced in this way, and that by cultivating this "freak" it has become a fixed condition? In many cottage gardens it is quite a common plant.

MARY H. CRAFER.

499. Venus'-Comb.—I am sorry to find that Bentham and other English botanists describe the plant *Scandix Pecten-Veneris* as having compound umbels. I do not think it possible for any one, after examining the plant with due care, and exercising ordinary intelligence, to arrive at any such conclusion. The little French botanical work on wild plants by Bonnier and de Layens, correctly describes the umbels as "simple," and I think this throws some credit on French botanists. To form an umbel the rays must all start from one point or centre, and they must not be branched. Where there are general umbels, its rays support on the top of each one an umbel of rays bearing each a terminal floret. These umbels are arranged in flat heads of flowers, and where there is a general umbel these umbels of flowers become united together in one uniform flat head. The flowers are thus arranged in compound umbels. In the *Scandix* the general umbel is absolutely wanting, and consequently each umbel of flowers is separate and independent, and each forms a simple umbel, and there are no compound umbels. It is true that the flower-stems of *Scandix* have branches with terminal umbels of flowers, but a branch cannot be called a ray of an umbel. There must be at least three rays starting from the same point, and unbranched, to form an umbel.

PETER HASTIE.

500. Unlovely Scenery.—In writing to me a short time ago a brother naturalist utters the following lament: "The rivers in Lancashire and Yorkshire generally are a most sorry sight; one has to hold the nostrils as one crosses them, and no living thing dwells in them, nor can a fly live on the surface of the poisoned waters; and so the swallow is absent, the trees on the banks die by inches, and many are skeletons. The oak and the ash, both of which have tender leaves, suffer greatly, and, as more mills are erected, and more sulphur poured into the air, and more poison into the rivers, are gradually being killed out. The sycamore, however, which has a tough leaf, stands it bravely. There is one species of poplar which seems to come next in endurance, and after that the thorn, and then the beech and elm."

EDMUND THOS. DAUBENY.

501. Black Rain.—On April 26 a rain-cloud hung over this valley, which caused such darkness that I breakfasted by lamp-light, close to a good-sized window, at 8.30 a.m. The rain in the puddles in the road was blackish, as if it had "passed through smoke." This is an unusual experience in the Eastern counties.

EDMUND THOS. DAUBENY.

South-acre, Swaffham.

502. Friday Street.—In your critique on some Surrey "Field-path Rambles" by "Walker Miles," you mention the fact of there being four "Friday Streets" in the rural district in the neighbourhood of Leith Hill, and you also mention that it has been suggested that "Friday" may be a corruption of "Frithway," and that Mr. "Walker Miles" invites further comment on the question. May I be allowed to say that I find from Bailey's Dictionary that "Frith" is a Saxon name for a "wood," and that it is so used by Chaucer. Is it not possible that all these places were originally ways through or by woods, and hence their name?

PETER HASTIE.

NATURAL HISTORY QUERIES.

121. A Kestrel at Close Quarters.—I was sitting reading one day last week, the house being very quiet, when I was suddenly startled by hearing what sounded like a small explosion, and it was apparently overhead, although I knew the room to be empty. At the same moment something fell outside the window. I jumped up, and looking out saw on the pathway close to me a large bird which I had never seen at close quarters before. It was either a sparrow-hawk or a kestrel—I am not learned enough on the subject to know which. The plumage was a reddish-brown, shading to darker, the breast a pale greyish shade, and striped or mottled with black. The legs yellow, also the beak and eyes, and the beak very much hooked. The bird was evidently partly stunned by the violent contact with the casement overhead. It stood without moving for several seconds staring at me. I went to call a friend to come and look at it, but was disappointed on my return to find it had flown. I am puzzled to know why a wild bird of this species was flying so very close to the house, and how, with its wonderful sight, it could have collided with the open window. It was not after the chickens as they were some way off. Is it possible it was chasing some smaller bird? I have even heard of that kind of bird flying against a glass window after a canary in a cage, but in this case there was no such attraction. I shall be so glad to be enlightened on this subject by some one who knows, as I think it was rather an unusual occurrence.

Haslemere, E. A. BEDFORD.
April 20, 1907.

122. Wasps.—Can any of your readers explain the following: I was sitting one hot day last August in my garden, and happening to look up I noticed some fifteen or twenty wasps flying to and fro to a laburnum tree near, which was covered with seed cases. I could not think what they were doing, and so looked more closely. I then discovered that the seed pods were thickly fringed with minute caterpillars hanging by their gossamer threads. These the wasps were darting at backwards and forwards; it put me in mind of tilting at the ring. I watched for a long time, but could not make out what their object was. Was it only sport on a hot summer's day, or was it possible they devoured these small caterpillars? I should be much interested to hear some one's opinion who is learned in the study of wasps, on this point.

Haslemere, E. A. BEDFORD.
April 19, 1997.

123. Bud Destruction.—Although residing in a London suburb I am a keen gardener and lover of Nature. This season a disappointment has been in store. My garden has an edging of Thrift (*Armeria maritima*), the "sea-pink," common upon the rocky shores of Cornwall, and from whence mine originally came, and every spring the plants give forth promise of a good display of bloom, but I now find that the buds have had their centres eaten away and only the brown outer skin of the buds surmount the flower-stalks. I have mentioned the circumstance to a friend, who replied that plants which they possess have this season had their buds nipped right off from the stalks and lay strewn about on the plants! Can any reader of NATURE NOTES, say (1) whether the culprits are sparrows, (2) whether they have heard of similar cases, as I believe the occurrence is most unusual, and (3) what is the reason of the action of bird or insect?

West Norwood. STANLEY EWART EVANS.

ASTRONOMICAL NOTES FOR JUNE, 1907.

Mercury will be visible as an evening star during last half of month. Near Jupiter at sunset on the 15th.

Mars rises in E.S.E. at 11.5 p.m. on the 1st, and at 9.22 p.m. on the 28th. Near Moon on the 26th.

Jupiter sets in W.N.W. at 10.33 p.m. on the 1st, and at 9.7 p.m. on the 28th. Well visible in early evening during first half of month.

Saturn is a morning star rising in East at 1.28 a.m. on the 1st, and at 11.40 p.m. on the 28th. The beautiful rings of this planet are now scarcely visible. Near Moon on June 4, before sunrise.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members stand for election: *Central Society.*—Sydney Cable, Esq.; Walter Cocksedge, Esq.; Stanley Ewart Evans, Esq.; the Rev. Claude Hinscliff; D. Howe, Esq.; Gregory M. Mathews, Esq., F.L.S., F.Z.S.; Miss Margaret Pott; Mrs. H. M. Pritchard; Mrs. E. F. Probart; G. G. Trehern, Esq,; Cecil Worssam, Esq.

Birmingham Branch.—Mrs. Lowndes.

Ealing Branch.—Cyril R. Harris, Esq.; Miss Jessie W. Harris.

Farnham Branch.—H. Bury, Esq.; Miss Ellen Webb.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: F. Alfred Currey, Esq., £1 1s.: Mrs. F. A. Currey, £1 1s.; G. A. Macmillan, Esq., £1 1s.; H. Chipperfield, Esq., 10s. 6d.; H. O. Minty, Esq., 10s.; the Rev. E. F. Russell, 10s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of June 17 and July 15, for the purpose of issuing books to members.

The Honorary Librarian announces with great pleasure the addition to the Library of the first edition of White's "Selborne," 1789, purchased by the Society. This is a fine tall copy, which when bought was bound in unsightly German boards, but through the liberality of Mr. Rashleigh Holt White, great-grand-nephew of Gilbert White, it has been splendidly re-bound in red morocco.

Nature Study Prize.—The prize of half a guinea offered by Mr. A. Holte Macpherson for the best illustrated description of the growth of three plants, dealing with the unfolding of the leaves and opening of the flowers, has been awarded to Miss Irene Coombe, of Streatham Hill High School.

EXCURSIONS.

Saturday, April 13.—By the courtesy of the Rev. the Provost of Eton (Dr. Hornby), forty-three members on this day visited Eton College. Mr. Wilfred Mark Webb first of all conducted the party over the Museum, where there were to be seen the fine Egyptian collections bequeathed by the late Major W. J. Myers. These include his well-known specimens of blue faience and a remarkable series of portrait models from Romano-Egyptian tombs. Considerable interest was aroused by the collection presented by Major Myers, which illustrated a very early civilisation, namely, that of the prehistoric people of Egypt, named by Professor Petrie "the new race," because when he found their remains he at once saw that they differed greatly from the dynastic Egyptians. At first he thought that they were invaders and conquerors, but further researches have shown that they were the forerunners of the better known inhabitants of Egypt. The stone knives of these prehistoric people are of marvellous workmanship, as are also their stone vases, which date from between 5000 and 6000 B.C.

The local and other natural history collections in the older part of the building were also examined and described, and then attention was directed to the new wing built by Mr. and Mrs. Frank Lawson in memory of their son, Lionel George Lawson, who unfortunately lost his life in the fire at Eton a year or two ago. The ground floor is given up to cases of birds mounted in their natural surroundings, and the upper room is devoted to illustrating the various features and peculiarities in the structure of birds. Cases illustrating feathers, eggs and nests have been already arranged, and other series are in course of completion.

The party on leaving the Museum proceeded to examine the College Hall in which the scholars dine, and afterwards went to the Fellows' Library, where the famous Mazarin Bible was seen. The original charter and grant of arms from Henry VI. were among the interesting documents displayed.

After tea the College Chapel was visited, where the new altar and Watts' celebrated picture, "Sir Galahad," attracted attention. Some members also found an opportunity of seeing the lower Chapel and some of the school-rooms.

April 20.—A party of some thirty Selbornians and friends, under the guidance of Mr. George Watts, foregathered at Rickmansworth Station, whence they took their way to the hamlet of Hill End. Tea was taken at Harefield Green. Starting again, the party reached Harefield Church, rich in reminiscences of Elizabeth, Milton, and Shakespeare, of Newdigates and Batchworths, of Swanlands and Egertons, and other prominent actors in English history—not forgetting its vicinity to Breakspeares, the home of our only English Pope, Adrian IV.—and possessing some of the most interesting brasses that this country affords. These latter were viewed, and some were rubbed by enthusiasts. A pleasant walk homewards across the fields to Northwood was somewhat marred by gathering clouds, which later on culminated in sharp showers.

April 27.—Epping Forest. On a promising but cold afternoon, a party of Selbornians assembled at Theydon Bois Station. They passed through the picturesquely quaint village and by the Green with its fine avenue of elms, entered the Forest by Genesis Slade, and then rambled by devious and unfrequented tracks to Wormleyton Pits and, *viâ* the Green Ride to Epping Green, seeing on the way many interesting birds, including Jays, Wood Pigeons, and several Tits, &c. The birds were all singing freely after the recent rain and the whole forest looked brilliant in its fresh spring mantle, while the paths were starred in all directions with woodsorrel, anemones and wood violets, and the gorse flamed in the bushes. An attempt to return through Epping Thicks was frustrated by the weather, so the high road was reluctantly resorted to. Ambresbury Banks (the destination) was soon reached. This is an ancient camp about whose origin some doubt exists, the popular notion being that it was formed by Britons and that probably on it Boadicea met her final overthrow by Suetonius. The Essex Field Club, in making explorations in 1881 and 1882, found some flint chips and fragments of pottery indicating British origin, but no very approximate date.

May 4, 1907.—Owing to the most unsettled weather a small party of ten Selbornians only met Mr. W. Percival Westell, F.L.S., at Hill End, near St. Albans, but the weather fortunately took a turn for the better, and both afternoon and evening were brilliantly fine. The guide pointed out various wild plants, birds, and other objects *en route*, and gave several informal dissertations to various members of the party on some phases of bird-life. The Nightingale and Cuckoo were heard for the first time this year, and the piccolo solo of the Willow Wren was to be heard very frequently. The Chiffchaff uttered his "chivy, chavy" occasionally, and the Chaffinch and many beautiful Song Thrushes and Blackbirds were in fine song. A Moorhen was observed strutting gaily along near a wood some distance from water, a pair of Wild Duck were flushed in a clover field, a Wren's nest cleverly placed on an old oak stump, and a Chaffinch's nest deftly hung in the pliant branches of a spruce fir, all engaged attention. Several pairs of Partridges were put up, as also Pheasants, Hares, and Rabbits.

Tea was held at the Chequers, Cromer Hyde, and the ramblers then leisurely strolled across Brocket Hall Park, the residence of Lord Mountstephen, and arrived at Ayot Station at 8.30. Whilst waiting at Ayot, Mr. Poole took the opportunity of proposing, and Mr. Nash seconded, a hearty vote of thanks to Mr. Westell for acting as guide.

Saturday, May 11.—A very enjoyable ramble was taken by fourteen Selbornians, under the guidance of Miss Giberne, over Bookham Common to Leatherhead. The day was perfect and the common looked very pretty. After a walk of about four miles through fields and by the high road, the party reached Leatherhead, where tea awaited them at the Institute. On the Mill Pond just outside Leatherhead a pair of Coots had a nest within a few yards of the bank, and members were greatly interested in watching the movements of the birds.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, June 17.—Publications Committee at 5.30 p.m.
Tuesday, June 25.—Council Meeting at 5.30.

Excursions.

Saturday, June 8.—Oxshott and the Black Pond. Meet at Oxshott Station on arrival of train leaving Waterloo (L. & S.W.R.) at 2.15, Clapham Junction

at 2.27, Surbiton at 2.47. Cheap return tickets, 1s. 7d.; walking distance about 3 miles. Guide, Mr. Hubert H. Poole.

Saturday, June 15.—Weybridge and the banks of the Wey. Train leaves Waterloo at 2.28, Clapham Junction at 2.27. *Passengers from Clapham Junction change at Surbiton.* Take return tickets to Weybridge, 2s. 10d. Walking distance, 5 miles. Guide, Dr. Henry Willson.

Saturday, June 22.—Burnham Beeches, Stoke Poges, and East Burnham Park (by kind invitation of Mr. and Mrs. Harry J. Veitch). Train leaves Paddington (G.W.R.) at 2.33, arriving at Slough 3.12; the party will drive to Stoke Poges and to East Burnham Park, and after tea will walk to Burnham Beeches and drive back to Slough.

On account of the necessity for arranging for the vehicles beforehand, members wishing to attend must notify the Excursions Secretary before June 12, enclosing remittance of 4s. to cover cost of train and drive. If members will give notice to the Excursions Secretary well before this date it will greatly assist him. The Excursions Secretary will take all tickets, and will meet members on the platform at Paddington ten minutes before the departure of the train.

Saturday, June 29.—West Drayton and Iver. Meet at West Drayton Station on arrival of train leaving Paddington at 2.33, Ealing at 2.46. Return fare, 1s. 5d. Guide, Mr. Wilfred Mark Webb, F.L.S.

Saturday, July 6.—Cassiobury Park and Gardens, Watford (the Gardens by kind permission of Mrs. Peel), Whippendale Wood and Chandler's Cross. Meet outside Watford Station (L. & N.W.R.), at 3 p.m. Train leaves Broad Street at 1.45, Euston at 2.20, Willesden Junction 2.30. Cheap tickets can be taken at Euston, 1s. 9d. return. Tea at Keeper's Cottage. Walking distance, 7 miles. Return trains leave Watford at 7.50 and 8.35. Guide, Mr. W. Percival Westell, F.L.S., M.B.O.U.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Secretary of the Excursions Committee*, at 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

Miss A. M. Bonus.—The insect from North Queensland is not a beetle, but hemipterous, one of the Pentatomidæ, *Tectocoris lineola*, Fabr.

Peter Hastie.—The plant sent is *Phacelia tanacetifolia*, Benth., one of the Hydrophyllaceæ, a native of sandy and gravelly stream-banks in Western California, much grown by apiarists for the sake of its honey.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

JUST PUBLISHED.

4to. Beautifully illustrated with 38 full-page Plates and a 5-figure 15-inch coloured Manikin and Key showing all the organs of the body.
Price **12/6** net.

By Eugen Sandow.

Construction and Re-Construction of the Human Body,

Being a descriptive account of his System of Cure by Physical Exercises, with an Introduction

By Dr. Sir A. Conan Doyle.

JOHN BALE, SONS & DANIELSSON, LTD., 83-91, Gt. Titchfield Street, W.
And at all Booksellers and Libraries.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY
J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

A BOOK FOR LOVERS OF FLOWERS.

Wild Flowers of the British Isles.

Illustrated and written by H. ISABEL ADAMS, F.L.S.

Revised by JAMES E. BAGNALL, A.L.S.

With 75 Coloured Plates. 1 Vol. demy 4to. **30s.** net.

THE exquisite facsimile reproductions of these charming water-colour drawings of British Flora, combined with the terse and simple language of the text, from which all superfluous botanical words have been omitted, together make up a work which every lover of Nature will feel impelled to own. But it is to the Botanist, the Student, and the Teacher that its educational value will be apparent at a glance, and to whom this work will appeal as an indispensable guide. It will also be of value to the artist who needs studies of plant life as a work of reference for designing and composition. **The seventy-five coloured plates illustrate two hundred and forty-three British wild flowers, faithfully drawn and painted from life, reproduced in colours** so perfectly as to constitute a triumph for modern methods of colour-printing.

London: W. HEINEMANN, 21, Bedford Street, W.C.

MODERN CANNIBALISM.

By JOHN GRANT.

CLOTH, PRICE **1s.** NET.

JOHN BALE, SONS AND DANIELSSON, Ltd.,
83-91, Great Titchfield Street, Oxford Street, London, W.

In square crown 8vo, tastefully printed and bound. Price **6s.** net.

Flowers and Trees of Palestine.

A Short Account of some of the Flora of that Country.

BY AUGUSTA A. TEMPLE.

Illustrated by 40 Photographs from nature, with an extended Glossary of Flower Names.

CHEAP EDITION. In crown 8vo, tastefully printed and bound, **2s. 6d.**

Literary Celebrities of the Lake District.

BY FREDERICK SESSIONS.

"The book is one to send the visitor away to the Lake district with renewed zest, and enhance his glowing recollections when he returns."—*Pall Mall Gazette.*

"The volume is intelligently written, well illustrated, and attractively bound."—*Record.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

No. 211. Vol. XVIII. July, 1907

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
ANNUAL GENERAL MEETING	121
TWENTY-FIRST ANNUAL REPORT	126
BALANCE SHEET	134
SELBORNIANA	135
NATURAL HISTORY NOTES.—Pythons and Tigers.—The Cuckoo on the Wing.—The Song-Thrush in Hyde Park	137
NATURAL HISTORY QUERIES.—Wrens	138
ASTRONOMICAL NOTES FOR JULY, 1907	138
SELBORNE SOCIETY NOTICES	138
ANSWERS TO CORRESPONDENTS	140

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.
CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

NEW NATURE-STUDY BOOKS.

FLOWERS OF THE FIELD.

By the Rev. C. A. JOHNS.

Revised throughout and re-edited by CLARENCE ELLIOTT. With 92 coloured Plates (containing 268 figures) of British Wild Flowers by Miss E. N GWATKIN, and numerous illustrations in the text. 8vo, cloth extra. **7/6** net.

A really trustworthy popular guide to the Wild Flowers of Britain, up-to-date in its text and representative of the latest methods of coloured book-illustration.

"A capital reprint of Johns'. It shows what a revolution has been accomplished in the domain of illustrated books. The volume itself will always be a welcome present to the young botanist."—*Country Life.*

"This extremely popular handbook is now re-issued in a much improved style. We can conscientiously and thoroughly recommend it."—*Rochester Naturalist, July, 1907.*

"The most comprehensive and useful book the botanist can desire."—*Standard, 11th June.*

"There is no doubt that Johns' is now once more one of the very best flower-books of the day."—*Daily News, 17th June.*

Birds and their Nests and Eggs in and around Great Towns. With 58 large illustrations from Nature. By GEORGE VOS, M.D.

This little work is from the pen and camera of a well-known London doctor, who has devoted a large part of his leisure hours to London ornithology.

"We earnestly recommend this charmingly written and exceedingly practical little book to all who are interested in Nature-Study, and particularly to the 600 members of the School Nature Study Union in London. The author not only presents 60 of his photographs, but tells how they were taken, and how others may take them. Dr. Vos has the knack of securing the birds in characteristic attitudes, and we cannot help admiring the untiring patience which he must possess to obtain such a fine collection. THE AUTHOR WRITES IN SUCH A BREEZY, INTERESTING STYLE, THAT BOYS AND GIRLS WILL READ IT WITH EASE AND PLEASURE."—*Schoolmaster, 29th June.*

"At the low price of 1s. the book is A MARVEL."—*Morning Post, 24th June.*

Ants, Bees, and Wasps. By EDWARD SAUNDERS, F.L.S. With numerous Coloured and other Illustrations. **3/6.** [*July.*

Picture Natural History. By the Rev. J. G. WOOD. New Edition (1907), with 756 large illustrations. 4to, cloth, **7/6.** Also in three Parts: Animals; Birds; Fishes, Reptiles, and Insects.

Routledge's Country Books. Printed on Fine Paper, and with Coloured Plates and other illustrations. Crown 8vo, cloth gilt, gilt tops, each **3/6.**

Angling and where to Go. R. BLAKEY, ed. by SENIOR. Cheap Edition, **1/-.**

British Birds' Eggs and Nests. COLEMAN and ATKINSON. Cheap Edition, **1/-.**

British Butterflies. COLEMAN. Cheap Edition, **1/-.**

British Ferns and Allied Plants. MOORE.

British Moths. TUTT.

Common Objects of the Country. WOOD. Cheap Edition, **1/-.**

Common Objects of Microscope. WOOD. Cheap Edition, **1/-.**

Common Objects of Sea-Shore. WOOD. Cheap Edition, **1/-.**

Roses and their Culture. PRIOR.

British Ferns. Mrs. LANKESTER.

Collector's Handy-book of Algae, Fungi, Mosses, &c. NAVE.

Common British Fossils. TAYLOR.

The Playtime Naturalist. TAYLOR.

Sagacity and Morality of Plants. TAYLOR.

Science in Arcady. GRANT ALLEN.

Wild Flowers worth Notice. Mrs. LANKESTER.

Glaucus; or the Wonders of the Sea-Shore. KINGSLEY.

GEORGE ROUTLEDGE & SONS, LTD., BROADWAY HOUSE, LONDON, E.C.

ALL RIGHTS RESERVED.]

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 211. JULY, 1907. VOL. XVIII.

ANNUAL GENERAL MEETING.

MR. DUDLEY BUXTON (the Chairman of the Council), upon taking the Chair, said: Although the meeting was in a sense a purely formal one, the business being the election of the President, the Vice-President, and the Members of Council, yet there were certain matters which called for special remark, and he proposed to deal with these.

The Report and Balance Sheet would be submitted for adoption. As would be seen the Report recorded a year of strenuous effort. It has been marked by important changes in the system of election and other matters of government. In the past there had been perhaps too little attention paid by the members of the Society to the affairs of the Society. The Councillors had been automatically elected, one Council passing on its duties to its own nominees, whose election had become a formal confirmation of their nomination. By the revised rules this ceased. The representation of the Central Society was secured by the election of twelve councillors, none of whom would be members of a branch. Of these four would retire each year, but would be eligible for re-election, but in every case nominees of the Council would have to be announced in the pages of NATURE NOTES, a fortnight at least before the Annual General Meeting. On the present occasion all the elected members of Council would have to be submitted for acceptance by the meeting, as they had been elected for only one year at the last Annual General Meeting, which occurred before the alteration in the rules. It was hoped that the change which had been made would induce members of the Society to devote more personal attention to the Society's affairs, and be careful to elect such candidates from among their number whom they could trust to maintain the best traditions of the Selborne Society. There had been certain nebulous doubts expressed about the vitality of the Society, and these he (the Chairman) hoped and

believed would be removed by reading the report of the work which had been done. The Selborne Society did not intend to rest content with the sweet memories of its past, it proposed, with the help of its members, to be a very living, progressive body, prepared to undertake fresh work as well as to maintain what its efforts had promoted in the bygone years. It was essential, therefore, that the responsibility of guiding the Society's undertakings which lay with the Council, should be shared by every member of the Society, and this could be done by members availing themselves to the full of their franchise, and voting for such candidates only as they could trust. And this applied not only to the election of councillors but the equally important selection of delegates by the branches, since the delegates equally with the elected councillors controlled the Society's affairs. The election of President again gave the Society an opportunity of thanking Lord Avebury for his past services, and of securing his wise headship for another year. All must feel gratified that the President had taken a more intimate interest in the Society's affairs during the past year, and had kept in touch with its proceedings. There was no occasion to elect Trustees, as these held office until retirement. Of the two Trustees, Lord Avebury and Mr. Musgrave, the former had already been spoken of, and the present occasion offered an opportunity for a more than passing reference to the latter. It was a beautiful custom in certain collegiate foundations to offer up prayers for the memory of the "pious founder" on one day each year. Although the assembly before him would not regard the present as a meeting for prayer, yet he thought the silent heart's prayer of sympathy might well be offered for Mr. Musgrave, who, with Mrs. Musgrave, was their pious founder. They remembered their patron saint, Gilbert White, but perhaps more recent members were not so mindful of Mr. and Mrs. Musgrave, to whose patient work and ever ready sympathy the Selborne Society owed its origin, and in no small measure its subsequent success. The year had been one of some sorrow and anxiety to Mr. and Mrs. Musgrave, and he knew that the members of the Selborne Society would be glad to hear that the shadows of serious illness had passed away and that their "pious founders" were as keenly in sympathy with Selbornians as ever, and with renewed strength had gained ever fresh enthusiasm for the causes which the Selborne Society held so dear. It seemed to him that the occasion should be marked by an expression to Mr. and Mrs. Musgrave of the warm appreciation in which their labours were held by this meeting, as representative of the Society at large.

There was a novel feature on their Agenda this year, and that was the election of Honorary Members. Certain persons, whose names had been published in NATURE NOTES, had been nominated for this honour by the Council, and would be submitted to the consideration of the Meeting. All had rendered valuable services to the Society by promoting its objects in

various ways, but two names would ring with a personal note to all members of the Selborne Society, those were Mrs. Percy Myles and Professor Boulger. Mrs. Percy Myles' work had been uniformly valuable, unstinting, and often unrecognised, so that he felt it was peculiarly appropriate that she should have been selected as one of the first to be proposed for honorary membership. Mrs. Percy Myles had been the fairy godmother of the Society, and few could know all that she had accomplished during the many years of her association with it, and how loyally she had carried on the work which Percy Myles had had so much at heart. Professor Boulger, whose name came first on their list, had a record which all who read NATURE NOTES—and what true Selbornian did not do so?—would recognise as being one worthy of much honour. But Professor Boulger had done more than what even that record represented, he had helped the Council by advice and in many ways which only time was wanting to particularise. The Society might well rejoice to have the chance of showing Professor Boulger they were not ungrateful for his valued services.

The Balance Sheet would be submitted with the Report, and it would disclose what a very satisfactory state their finances were in. In past years their monetary affairs had been far less rosy, and their present solvency was largely due to the energy of their versatile Secretary, Mr. Webb, to whom he (the Chairman) felt much gratitude should be felt for his financial guidance. In passing on to the formalities of the meeting, the Chairman felicitated the Society upon its position, and expressed a hope that the oncoming years would increase the number of its friends and extend the sphere of its utility.

The Report and Balance-sheet were then proposed and adopted (see p. 126).

The Ballot was then taken for the President and Councillors, and the Right Honourable Lord Avebury, D.C.L., F.R.S., and W. Bickerton, H. Norman Gray, P.A.S.I., T. H. Hiscott and Mrs. McLeod, proposed by the Council, were declared by the Scrutineers to be duly elected.

The names of those recommended by the Council for election as Vice-Presidents were then read; and, it having been proposed that those of Messrs. Hubert H. Poole, the Hon. Librarian, and Wilfred Mark Webb, the Hon. Secretary, should be added to the list, the following were declared, after the Ballot had been taken, to be elected:—

O. V. Aplin, F.L.S.
Prof. G. S. Boulger, F.L.S.
The Hon. Mrs. R. C. Boyle.
The Right Hon. James Bryce, M.P.
The Rev. H. E. U. Bull, M.A.
The Rev. R. Ashington Bullen, B.A., F.L.S.
Charles Burt, J.P.
Dudley W. Buxton, M.D.
His Grace the Archbishop of Canterbury.
The Hon. Sir John Cockburn, K.C.M.G., M.D.
Alfred T. Craig.
J. Shaw Crompton, R.I.
Fred Enock, F.L.S., F.R.M.S.

W. Warde-Fowler, M.A.
The Right Hon. Sir Edward Fry.
The Most Noble the Marquis of Granby.
The Right Hon. Sir Edward Grey, M.P.
The Rev. Professor Henslow, M.A., F.L.S.
Mrs. Arthur Hill.
Sir Robert Hunter, M.A.
Sir Harry Johnston, K.C.B.
G. B. Longstaff, M.D.
The Rev. the Hon. Edward Lyttleton, M.A.
A. Holte Macpherson, M.A., B.C.L., F.Z.S.
William Henry Maw, M.I.C.E., F.R.A.S., F.R.M.S.
The Right Hon. Lord Montagu of Beaulieu.
G. M. Murray, F.R.S., F.L.S.
G. A. Musgrave, F.Z.S., F.R.G.S. (*Founder*).
Mrs. G. A. Musgrave (*Founder*).
Mrs. Percy Myles.
J. L. Otter.
Earl Percy, M.P.
Mrs. E. Phillips.
Hubert H. Poole.
W. P. Pycraft, A.L.S., F.Z.S.
The Rev. Canon H. D. Rawnsley, M.A.
The Hon. Lionel Walter Rothschild, Ph.D., M.P.
R. Bowdler Sharpe, LL.D., F.L.S.
The Right Hon. The Earl of Selborne.
The Right Hon. The Earl of Stamford.
R. Marshman Wattson.
Wilfred Mark Webb, F.L.S.
W. Whitaker, B.A., F.R.S., F.G.S.
Rashleigh Holt White, M.A.

It was then proposed and carried that the following persons be elected Honorary Members of the Society: Professor Boulger; The Honourable Sir John Cockburn; Alfred T. Craig; L. Fletcher, F.R.S.; the Marquis of Granby; Sir Edward Grey; J. E. Harting; W. B. Hemsley, F.R.S.; The Rev. Professor Henslow, M.A., F.L.S.; Mrs. Richard Jefferies; W. F. Kirby; Mrs. Percy Myles; George Nicholson, F.L.S., V.M.H.; the Earl Percy; Dr. Rendle; William Senior; R. Bowdler Sharpe, LL.D.; H. de Varigny; A. J. Western; Rashleigh Holt White, M.A.; Henry Woodward, Ph.D., F.R.S.

The following six Vice-Presidents were nominated under Rule VIII. to serve on the Council: The Rev. H. E. V. Bull, M.A.; J. Shaw Crompton, R.I.; A. Holte Macpherson, M.A., B.C.L., F.Z.S.; Mrs. Percy Myles; W. P. Pycraft, A.L.S., F.Z.S.; and W. Whitaker, B.A., F.R.S., F.G.S.

The proceedings then terminated with a vote of thanks to Dr. Dudley Buxton for presiding.

In accordance with the suggestion made at the Meeting the following letter was drafted by the Chairman and Honorary Secretary and despatched to Mr. Musgrave:—

DEAR MR. MUSGRAVE,—At the Annual General Meeting of the Selborne Society, held on May 30, there was a general feeling that the Society should send Mrs. Musgrave and you its greeting. You are its "pious founders," and since, fortunately, you are both present in body as well as in spirit, the Selborne Society has more than a memory to reverence, it possesses the living sympathy of those two who have initiated its work and promoted its progress.

It was nothing less than fitting, therefore, that we Selbornians, assembled in conclave, should send to Mrs. Musgrave and you

our sincere well wishes, and express our hope that, with restored health and energy, you, our "pious founders," will live long and remain intimately in touch with the Society's work and in sympathy with its members.

We are therefore desired by the meeting to tender you congratulations on the successful completion of another year of the life of the Selborne Society, and to wish Mrs. Musgrave and you health and happiness, coupled with that "gentle content" which pervaded the soul of Gilbert White of blessed memory,

We are, dear Mr. Musgrave,
Yours sincerely,
(Signed) DUDLEY W. BUXTON,
Chairman of Council.
WILFRED MARK WEBB,
Honorary Secretary.

20, *Hanover Square, London, W.*
June 6, 1907.

To this letter the following reply has been received:—

DEAR DR. DUDLEY BUXTON,—Mrs. Musgrave and myself are greatly touched by the greeting of the members of the Selborne Society, which you and Mr. Webb have been so kind as to forward to us.

On our part two feelings predominate; one, a deep appreciation of the kindness which prompted the members at the General Meeting to express so warm a sympathy with those unworthy persons whom you designate as the pious founders of the Selborne Society; the other, a feeling of much regret that, owing to our residence being so far from town, and latterly to ill-health, we have been unable to remain as intimately in touch with the work of the Selborne Society and the members as we have so often desired to be.

For the hope expressed, that I may be completely restored to health, I am most grateful. Begging that you will convey to the Society the very sincere thanks of Mrs. Musgrave and myself.

We remain, dear Dr. Buxton,
In "gentle content,"
Yours sincerely,
GEO. A. MUSGRAVE.
THERESA MUSGRAVE.

Furzebank, Torquay.
June 10, 1907.

TWENTY-FIRST ANNUAL REPORT.

I.—General.

The relations subsisting between the branches and the Central Society have received careful consideration. As the main work of the Society has to be carried out with funds supplied by the Central body, the contributions from the branches become an important asset in enabling the Society to extend its sphere of usefulness. This, and the desire to bring the members of the branches into more close association with the Central Society, has led to various reforms in the constitution of the Society. The branch retains its autonomy provided the number of members is not less than ten. On falling below this strength the branch members would merge automatically into the Central Society. The financial contribution payable by any branch within twenty miles of the Central Offices has been fixed at one-fifth of its receipts, added to the cost of the Magazines supplied to its members.

The branches retain their representatives upon the Council, but to associate this representation more closely with a geographical area it has been decided to restrict for the future the membership of branches to persons living within the area delimited by the warrant, which alone establishes a branch. As it is obvious that such a restriction may in particular cases be a hardship, exceptions will be allowed when circumstances demand such a concession.

It is a matter for congratulation that the members of branches have loyally supported the Society in its attempts to improve its constitution. Even in the case of one branch, the executive of which adopted the mistaken view that it could dissolve the branch without the concurrent withdrawal of the warrant by the Society, no disruption took place beyond the resignation of some members. The branch as a whole has remained loyal, and the Society, although losing the aid of some valuable workers, yet has the satisfaction of knowing that their energies are still to be devoted to the work in which the Selborne Society has been the pioneer. This work, in the case in question, is henceforward to assume a purely local character. A further and, your Council thinks, very important reform, has been the recasting of the system by which the members of the Council are in future to be elected. The *personnel* will consist of the President, six of the Vice-Presidents, nominated by the Council, the Chairman of Council, the Treasurer, the Secretary, the Editor of the Magazine, the Librarian, all of whom will be elected by the Council, and twelve members of Council elected by the Society.

These Councillors may be recommended by the Council, and in that case their names will be published in the issue of Nature Notes published next before the Annual General Meeting.

Ballot papers will be issued in future to enable those who attend the meeting to nominate any member of the Society as President, Vice-President or Councillor, in the last case provided he or she is not a member of a branch. One-third of the elected Councillors will retire each year, but will be eligible for re-election provided they have attended one-third of the meetings of the Council. The Branches will elect delegates as heretofore, or in default of this the Council may co-opt as delegate some person to represent the Branch upon the Council. In thus rendering the procedure of election of the Council more precise and formal and giving members of the Society an opportunity of knowing those whom they are requested to support, it is hoped that the Society at large will take a more active part in ordering its affairs than has been the case heretofore. To induce every one who enters the Society, whether joining a branch or the Central body, to associate himself with the other members, all new members will in future be elected by the Council upon nomination.

These changes necessitated a revision of the Rules and afforded an opportunity of correcting various omissions, and of rendering the wording in some Rules more clear and definite. The Rules were carefully considered by your Council and the suggested amendments submitted to a special meeting of the Society held on April 26th, and were then passed.

The Council decided to ask members to pay a small sum for admission to the Conversazione to help defray the expenses of the refreshments. This charge was made by way of an experiment, and whether it will be repeated must depend upon the decision of the Council which will be elected. With regard to the Conversazione, members of the Selborne Society are reminded that such social gatherings fall outside the scheme of the Society, and must be supported by those who appreciate the pleasurable opportunities which they afford for members to meet and study objects of interest to all Selbornians.

The Annual Conversazione.—For the fourth time the Annual Conversazione was held in the Theatre and Halls at Burlington Gardens (Old London University) by the kind permission of the First Commissioner of His Majesty's Works, and the Civil Service Commission. In spite of the wet weather, the meeting was attended by nearly 600 guests. The number of exhibits was considerable, and included the original manuscript of "The Natural History of Selborne" and the original letters of John Mulso to Gilbert White.

The President, Lord Avebury, delivered the annual address, and among the Vice-Presidents who attended and spoke were the Earl of Stamford, Hon. Walter Rothschild, and Dr. Dudley Buxton.

John Mulso's Letters.—During the year, the Earl of Stamford, in whose possession are the letters of John Mulso to his life-long friend, Gilbert White, has allowed them to be published, and Mr. Rashleigh Holt White has prepared them for the press and written an introduction.

The Death of Mrs. Brightwen.—The Society has sustained a great loss owing to the death of its distinguished Vice-President, Mrs. Brightwen, F.Z.S., F.E.S., who did very much directly to help the Society, and by her numerous writings advocated strongly the objects for which it was founded.

II.—The Study of Natural History.

Prizes.—Reference was made in the last report to prizes which it was intended to offer to Associates and pupils in secondary schools, and two have been awarded during the year as follows:—

(1) A prize of half a guinea kindly given by the Rev. R. Ashington Bullen, B.A., F.L.S., F.G.S., for the best collection of twenty autumn fruits mounted and described, to Miss I. M. Barnett, of Clapham High School, Junior Branch.

(2) A similar prize kindly given by Mr. A. Holte Macpherson, M.A., B.Sc., F.Z.S., for the best illustrated description of the growth of three plants, dealing with the unfolding of the leaves and opening of the flowers, to Miss Irene Coombe, of Streatham Hill High School.

Nature Study.—Mr. Wilfred Mark Webb (Hon. General Secretary) carried out the duties of Honorary Secretary of "The Country in Town Exhibition," and the following are extracts from the report which has been published by the Trustees of the Whitechapel Art Gallery.

Country in Town Exhibition, 1906.

This Exhibition was opened on July 5 by Her Royal Highness, Princess Christian of Schleswig-Holstein.

In the absence of the President, Earl Carrington, the chair was taken by Lord Colebrooke. Mr. J. C. Medd, the Chairman of the Executive Committee, explained the various objects of the Exhibition and drew special attention to the indefatigable exertions of the Hon. Secretary, Mr. Wilfred Mark Webb, F.L.S., to whom the success of the Exhibition was so largely due, and to the valuable services rendered to the Exhibition by Miss Kate M. Hall, Curator of the Stepney Borough Museum.

The bays round the walls of the lower gallery were filled with plants kindly lent by various nurserymen, and by the Royal and County Council Parks, with the view to demonstrate what plants can suitably be grown in the atmosphere of London. Large plans of suggested improvements in East London were also exhibited by Mr. Imre Kiralfy. In the centre of the gallery were ranged tables, on which were exhibited specimens of plants grown by the children of the elementary schools. Specially interesting and pathetic were the exhibits sent in by the blind children of the Shillington Street School. Living things, such as pigeons, white mice, &c., together with some very interesting aquaria, were also shown.

The Small Gallery was devoted to plans of Garden Cities and Suburbs. Two large and most instructive plans were shown by Mrs. Barnett, the first representing the usual kind of suburb already in existence round London, and the second representing the mode in which it is proposed to lay out the Hampstead Garden Suburb.

In this room also were numerous plans and illustrations of Port Sunlight, Bournville, and the Garden City of Letchworth, all having relation to the same idea.

In the Upper Gallery was exhibited the work (mainly in connection with Nature Study) which was sent in by a very large number of schools, societies and individuals. Bees at work in their hives were also exhibited in the Upper Gallery.

The Rural Education Sub-Committee of the County Councils Association, upon which Mr. Webb also served, with the object of promoting the study of Nature in rural schools and other matters bearing on rural life, has asked a number of Education Committees to exhibit Nature study work at agricultural shows. Arrangements have been made in connection with the Royal Agricultural Show at Lincoln, the Bath and West Show at Newport, and the Royal Counties Show at Maidenhead.

In his capacity of Honorary Secretary of the Nature Study Section of the League of the Empire, Mr. Webb arranged two sectional meetings in connection with the important Federal Conference on Education opened on Empire day at Caxton Hall, Westminster, and gave a lecture entitled "Illustrations of Nature Study." The Conference was attended by upwards of 200 delegates from the Colonies and countries of the Empire and British Universities.

The South-Eastern Union of Scientific Societies.—Mr. J. L. Otter, (Honorary Treasurer) and the Honorary Secretary, represented the Society at the Congress of the South-Eastern Union of Scientific Societies at Eastbourne, and a number of other members of the Society attended. Up to the year 1906 the Selborne Society was represented at the Congress by two delegates only, but taking into consideration the fact that it is the largest Society affiliated to the Union, it was decided during the past year to increase the subscription so that the Selborne Society should be represented by four delegates in future.

Excursions.—Twenty-four excursions took place in the summer of 1906, of which one was in conjunction with the Essex Field Club, and another with the South-Eastern Union of Scientific Societies. At the remaining twenty-two there were present 410 members and their friends, making an average attendance of 19. The winter meetings, ten in number, were particularly successful, and once again the Society is indebted to the Lord Chamberlain for kind permission to visit St. James's Palace. The total attendance at the winter meetings was 373, the average being 37. The thanks of the Society are due to all the members and others who were so kind as to conduct the excursions and rambles. The whole work of organising these thirty-two excursions, which is no small undertaking, has fallen upon Mr. Hubert H. Poole (Honorary Secretary of the Excursions Committee), and the Society is greatly indebted to Mr. Poole for conducting one of the most important branches of its work.

A list of excursions is given below :—

Summer Excursions; 1906.

Date.		Place.	Guide.	No. of Members present.
April	21	Coulsdon ... ... (Farthing Downs and Devilsden Woods)	Mr. H. H. Poole	14
	28	King's Langley ... (King's Langley and Chipperfield Common)	Mr. L. Douglas Wilson	17
May	5	Epping Forest ... (Chingford and High Beach)	Mr. C. H. Cox	46
	12	Elstree ... ... (Edgware and Mill Hill)	Mr. E. A. Nash	25
	19	Berkhamsted ... (Berkhamsted, Ashridge and Aldbury)	Mr. W. Percival Westell, F.R.H.S., M.B.O.U.	23
	26	Leatherhead... ... (Leatherhead, Fetcham and Bookham)	Mr. A. B. Wilkinson	4
June	9	Bickley ... ... (Roundabout and Petts Wood)	Mr. C. M. Mühlberg	34
	16	Stoke d'Abernon ... (Stoke d'Abernon Church and Manor House)	Mr. Philip M. Johnston	14
	23	Wimbledon ... ... (Old Rectory House and Common)	Mr. S. Willson	28
	30	Havering-atte-Bower (Romford, Havering Park and Pyrgo Park)	Mr. A. B. Hornblower	16
July	7	Weybridge ... ... (St. George's Hill and Fox Warren)	Dr. Henry Willson	18
	14	Rickmansworth ... (Sarratt and Chandler's Cross)	Mr. G. Watts...	18
	21	St. Albans ... ... (St. Albans Abbey and Verulamium)	Mr. W. Percival Westell, F.R.H.S., M.B.O.U.	18
	28	West Drayton ... (West Drayton and Iver Water Splash)	Mr. Wilfred Mark Webb, F.L.S. ...	36
Aug.	11	Keston ... ... (Hayes Common and Downe)	Mr. B. T. Lowne	15
	18	Bricket Wood ... (Aldenham and Munden)	Mr. W. Percival Westell, F.R.H.S., M.B.O.U.	7
	25	Wisley ... ... (Byfleet and Wisley Gardens)	Mr. Fitzwater	8
Sept	1	Epsom ... ... (Tadworth and Walton Heath)	Miss Giberne	9
	8	Epping Forest ... (Chingford and Fairmead Plain)	Mr. C. Nicholson	12
	15	Ightham ... ... (Kemsing and Wrotham)	Mr. A. C. Hinton	14
	22	Titsey Hill ... ... (Woldingham and Oxted)	Mr. C. M. Mühlberg	27
	29	Rickmansworth ... (Chess Valley and Chenies)	Mr. H. H. Poole	7
		Loughton to Epping. Joined the Essex Field Club (Fungus Foray in Epping Forest)		—
	27	Zoological Gardens. Joined the Autumn Meeting of the South Eastern Union of Scientific Societies		—

Winter Excursions.

Nov.	10	British Museum (Natural History) (Palæontological Department)	Dr. A. Smith Woodward	24
	17	Collection of Birds' Nests and Eggs	Mr. Robert H. Read, M.B.O.U. ...	23

		Place.	Guide.	No. of Members present.
Dec.	8	Fur and Skin Warehouse	Mr. C. M. Mühlberg	59
	15	Whitgift Hospital, Old Palace, and Croydon Parish Church	Mr. A. Jones, Miss Dorothea Latham and Mr. John Corbet Anderson ...	43
1907				
Jan.	19	Meteorological Station	Dr. H. R. Mill	16
	26	British Museum (Natural History)	Dr. R. Bowdler Sharpe	43
Feb.	16	British Museum ... (Stone Age Gallery)	Mr. Reginald A. Smith	24
	23	Streatham Parish Church	Miss A. E. Willson	16
March	9	Lambeth Palace ...	Mr. H. Kershaw	61
	23	S. James's Palace ...	The Rev. Canon Edgar Sheppard, D.D., C.V.O.	64

III.—The Protection of Animals.

The Use of Feathers for Ornament.—We welcome the active part which our President, Lord Avebury, has taken in the affairs of the Society, a part for which one and all accord grateful thanks. It was suggested to Lord Avebury that a measure was needed to secure protection to those birds other than of domestic breeds which are destroyed to supply ornaments for dress purposes. To the regret of the Selborne Society the President stated that any such measure would have no chance of becoming law at the present time.

It is hoped that so desirable a reform may be effected in the near future.

The Brent Valley Bird Sanctuary.—The Bird Sanctuary Committee of the Brent Valley Branch has been actively pursuing its work. The Branch has published an illustrated pamphlet giving an account of the Sanctuary, and at the same time has made an appeal for funds. Copies of the pamphlet, price 6d. each, may be had from the Local Honorary Secretary, or the Honorary General Secretary.

IV.—The Protection of Plants.

Professor Boulger, the Editor of Nature Notes has formulated some suggestions with regard to a measure for the Protection of Plants, and the Council has asked Lord Avebury to introduce the matter to Parliament.

V.—Places of Antiquarian Interest and Natural Beauty.

Treasure Trove.—The pamphlet issued by the Treasure Trove Sub-Committee of the South-Eastern Union of Scientific Societies, has been reviewed in Nature Notes, and it may be pointed out here, that all the members of that Committee belong to the Selborne Society, namely, Dr. Martin, Mr. F. W. Rudler, I.S.O., and the Honorary Secretary, Mr. H. Norman Gray.

Purley Beeches.—Up to the present time the money needed to purchase Purley Beeches has not been entirely raised. It is hoped that this open space will be secured; and the Council of the Selborne Society has voted a donation of five guineas to the fund.

Malvern Hills.—The Council notes with pleasure that the scheme for carrying a light railway up Malvern Hills has been abandoned for the time being, and the sylvan beauty of the spot remains unmolested.

VI.—Publications.

Nature Notes.—Attention must be called to a new feature in the magazine, in the shape of the astronomical notes which have been kindly contributed each month by a well-known astronomer.

Professor Boulger has carried on the valuable work of editing the Society's magazine for the last ten years, and once again an opportunity recurs to offer our thanks to him for his trouble.

During the six months' absence of the Editor in Peru his duties were ably undertaken by the Honorary Secretary.

Nature Notes in School.—In several schools it has become the practice either to distribute copies of Nature Notes among the children, to use the magazine for reading and conversation classes, or to place back volumes in the school library. It is hoped that members and others will promote these excellent means of studying natural history, by obtaining and distributing copies of the magazine in the future.

Prospectus.—The illustrated prospectus has been revised, and copies containing the names of the new Council and the list of local secretaries will be ready for distribution within a few days of the Annual Meeting.

VII.—Library.

The most important addition to the library has been the purchase of a perfect copy of the first edition of "The Natural History of Selborne," and the thanks of the Society are due to Mr. Rashleigh Holt White, who generously had the copy bound at his own expense. Some twelve other editions have been presented or purchased, while a number of other books has been included in the list.

Members are reminded that they can obtain volumes upon application to the Honorary Librarian.

VIII.—Organisation.

Membership.—The present number of members of the Society is 1,653, and there are 30 names standing for election. By the rules, which were amended at a General Meeting held on April 26, all members must now be elected by the Council after nomination by two members. Relatives, when resident in the house of an ordinary member, may themselves become ordinary members on payment of 2s. 6d. annually, but this will not entitle them

to receive copies of the magazine. It is further provided that honorary members may be elected at a General Meeting after nomination by the Council, and the following is a list of those elected on May 30, 1907:—

Professor Boulger; The Hon. Sir John Cockburn, K.C.M.G.; Alfred T. Craig; L. Fletcher, F.R.S.; Sir Edward Grey; J. E. Harting; W. B. Hemsley, F.R.S.; The Rev. Professor Henslow, M.A., F.L.S.; Mrs. Richard Jefferies; W. F. Kirby; Mrs. Percy Myles; George Nicholson, F.L.S., V.M.H.; the Earl Percy; Dr. Rendle; His Grace the Duke of Rutland; William Senior; R. Bowdler Sharpe, LL.D.; H. de Varigny; A. J. Western; Rashleigh Holt White, M.A.; Henry Woodward, LL.D., F.R.S.

Rules.—As already mentioned, the rules have been amended, and the most important changes have been indicated in the body of this report.

Branches.—The following is a list of the branches with their Honorary Secretaries:—

Abinger and Shere.—Miss Agnes Hill, West Hackhurst, Abinger, Dorking.
Bath.—Mrs. Allon Tucker, 9, Green Park, Bath.
Birmingham.—Miss Archer, 87, Hagley Road, Edgbaston, Birmingham.
Brighton.—Mrs. Griffith, 59, Montpelier Road, Brighton.
Croydon and Norwood.—E. A. Martin, F.G.S., 58, Whitworth Road, South Norwood, S.E.
Ealing (*Brent Valley*).—Mrs. Wilfred Mark Webb, Odstock, Hanwell, W.
East Riding.—Rev. W. D. Wood Rees, Barnby Moor Vicarage, Yorks.
Farnham.—Mrs. Marindin, Frensham, Farnham.
Hammersmith and Fulham.—C. W. Cooke, F.R.H.S., 82, Bishop's Road, Fulham, S.W.
Hampstead (*Northern Heights*).—*Pro. tem.*, Vincent J. Hull, 83, Mansfield Road, Hampstead, N.W.
Kensington.—Miss Tickell, 6, Cromwell Crescent, S.W.
Rape of Lewes.—Mrs. A. Payne, Hatchlands, Cuckfield, Haywards Heath.
"*Richard Jefferies*" (*Worthing*).—Captain J. Chippendall-Healey, 25, Lorna Road, Hove.
Rother Valley (*Midhurst*).—Miss Richards, Easebourne, Midhurst, Sussex.
Sutton.—Miss Berry, The Uplands, Sutton.
Wimbledon and Putney.—Miss Ada Smith, Walcot Lodge, Putney.

Junior Branches.

Bromley (*Quernmore School*).—
Chippenham Secondary School.—E. Newall Tuck, The County School, Chippenham, Wilts.
Clapham High School (*Field Club*).—Miss D. Shove.
Dover College.—C. R. H. Castellain.
Epsom College (*Natural History Society*).—H. E. Gardner.
Haileybury College (*Natural Science Society*).—F. W. Headley.
Hulme Grammar School.—A. C. Pickford.
Kensington, Roland Houses (*Nature Study Society*).—Miss G. E. Southwell.
North Middlesex.—C. M. Hall, 33, Goring Road, Bowes Park, N.

Children's Section.—Miss E. M. Grint.

Seaford.—Miss W. Poole, Queen's Park House.
Totnes, King Edward VI. School (*Natural History Society*).—G. F. Pollard.
Warrington Training College.—The Rev. Canon Morley Stevenson, M.A.

As explained earlier in the report, the Council now elects all members whether they belong to Branches or not, and Branch

The Selborne Society.

Dr. RECEIPTS AND PAYMENTS FOR THE YEAR ENDING MARCH 31, 1907. Cr.

	£	s.	d.
To Cash at the Bankers, April 1, 1906	248	7	8
To Sundry Receipts—			
1906 Subscriptions—Balance ... £78 12 0			
1907 Subscriptions—on Account ... 177 10 6			
	256	2	6
Sales of NATURE NOTES to Branches	72	15	0
Contributions from Branches	25	7	1
Donations	10	0	4
Sale of Tickets for Soirée, &c.	17	5	4
Interest on Deposit	3	1	1
	£632	19	0

	£	s.	d.
By Sundry Payments—			
Printing and Postage of NATURE NOTES and cost of Index for the Year	164	8	7
Expenses of Annual Soirée	56	2	5
Editor	30	0	0
Clerical Assistance	25	0	0
Rent	15	15	0
Stationery and Printing	8	0	0
Petty Payments	22	11	1
By Contributions—			
Purley Beeches Fund 5 5 0			
"Country in Town" Exhibition ... 3 3 0			
South Eastern Union of Scientific Societies... ... . 1 10 0			
	9	18	0
By Balance at the Bankers (*less* cheques outstanding £45 5s. 9d.) 31st March, 1907	185	8	11
By Cash on Deposit at Bankers, 31st March, 1907 ...	115	15	0
	£632	19	0

We have examined the above Cash Account with the Vouchers, and certify that it is correct.

26, THEOBALD'S ROAD,
GRAY'S INN,
May 27, 1907.

CRAIG & SON, *Chartered Accountants.*
Honorary Auditors.

	£	s.	d.
Balance	301	3	11
	£301	3	11

	£	s.	d.
Liability to Members for NATURE NOTES to December 31, 1907, estimated at	123	0	0
Balance	178	3	11
	£301	3	11

membership is restricted to the area delimited by the Society's warrant, except by special permission of the Council in individual cases. Furthermore, no Branches shall consist of less than ten members, and Branches within a radius of twenty miles of the offices of the Society (which shall be in London) shall contribute to the General Fund not less than one-fifth, and other Branches not less than one-tenth, of their gross annual receipts, in addition to moneys due for publications or services rendered.

SUMMARY OF BRANCH PAYMENTS

Made during the Financial Year ending March 31, 1907.

Branch.	Paid for NATURE NOTES.	Contributions.
Abinger and Shere	£1 14 8	£0 10 0
Bath	3 10 0	—
Birmingham	9 6 8	3 8 0
Brighton	3 5 0	0 5 0
Clapton (1906)	3 15 10	1 1 0
,, (1907)	—	3 2 6
,, ...	— (Donation)	5 18 6
Croydon (1905)	—	1 7 3
Ealing	7 0 10	1 19 4
East Riding	1 13 10	—
Farnham	—	0 14 0
,, ...	— (Donation)	1 0 0
Hammersmith and Fulham... ...	0 16 9	—
Hampstead	24 4 7	6 0 0
Rape of Lewes	1 8 2	0 6 6
"Richard Jefferies"...	1 1 8	0 5 0
,, ,, ...	— (Donation)	1 3 4
Rother Valley (Midhurst) (1905) ...	1 13 4	0 10 6
,, ,, ,, (1906) ...	1 18 4	0 11 0
,, ,, ,, ...	— (Donation)	2 0 0
Wimbledon and Putney	2 10 0	1 1 4
	£63 19 8	£31 3 3

The subscriptions from the following Branches for 1906 have been paid in full, and these are included under the heading of subscriptions:—Kensington and Sutton.

SELBORNIANA.

PURLEY BEECHES.—Members will be interested to hear that the necessary amount has now been raised, and that the fund has now been closed. Mr. E. A. Martin asks us to thank those members who so kindly responded to his appeal, not the least gratifying incident arising therefrom being the collection which was made at a recent ramble, the proceeds of which were forwarded to Mr. Martin by Mrs. Mühlberg.

CROSBY HALL.—Whilst, in common with all lovers of antiquity, we were horrified to hear of the threatened destruction of this gem of mediæval architecture, with its beautiful roof and oriel, and were, perhaps, even more grieved at the callous philistinism displayed by the Corporation, it was some consolation

to read of the prompt protest of all important bodies of those who know. Lord Avebury at once joined in this protest, as at the same time President of the Society of Antiquaries and of our own Society.

SHOOTER'S HILL, ELTHAM COMMON AND CHARLTON.—At the recent highly successful congress of the South-Eastern Union of Scientific Societies—which, by-the-bye, proposes to extend its area to include Berks., Herts. and Essex—it was unanimously resolved that it is desirable that as much as remains unenclosed of Shooter's Hill and Eltham Common should be permantly secured as an open space—to be, as was said, the Hampstead Heath of South-East London. It was also resolved that it was desirable to add the earthwork known as Charlton Camp, and the classic geological section adjoining, to Maryon Park.

BIRD PROTECTION ORDERS.—We have received from the Home Office Wild Birds Protection Orders for Essex, dated December 14, 1906, in substitution for that of December, 1901; for West Yorkshire, dated February 6, 1907, repealing that of January, 1906; for Leicestershire, dated February 20, 1907, repealing that issued two years before; and for Hastings, dated March 9, 1907, repealing one issued three years previously. Space does not allow of our stating their provisions at length, but we may remark that we are glad to see that all eggs are protected on the Eastern fore-shore of Essex, and on the cliffs and in the Alexandra Park at Hastings, and that the killing or taking of any wild birds on Sundays is prohibited in this last-named borough. It seems a pity that in some of these orders so many parishes are excluded from the operation of such useful provisions.

BLACK CURRANT MITE.—The Board of Agriculture and Fisheries desire to announce that a new edition of their leaflet on the Black Currant Mite has been published, in which information on the treatment of this pest with lime and sulphur has been incorporated. Fruit-growers whose bushes have been attacked with the mites are advised to experiment with this process. Copies of the leaflet may be obtained gratis and post free on application to the Secretary of the Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W. Letters so addressed need not be stamped.

NATURE STUDY INSTRUCTION.—We have been asked to call attention to the course of lessons for teachers, in botany, zoology, geology and gardening, at the Horticultural College, Swanley, Kent, beginning in September. Ladies desirous of joining should communicate with the Principal.

NATURAL HISTORY NOTES.

503. Pythons and Tigers.—I happened to take up a few copies, the other day, of NATURE NOTES, and read with interest the remarks made about "Pythons" and Tigers. Now I happen to have lived for a considerable time in the depths of the jungle in Upper Burma, where snakes and tigers were frequently to be met with, and though I did not trouble myself much about the habits of the creatures I came across, yet one thing I could not help noticing was, the extraordinary fear that all the large animals had for even the smallest of snakes. To my mind, the story of "Three in a Tree" is absurd, because I am convinced that no tiger would willingly remain in a tree if a python were there, quite apart from the fact that it is too absurd talking and arguing about a tiger being in a tree at all. Still, if a huge python and a tiger did come in contact, as I suppose on most rare occasions they may have, I do not think that it would be such a one-sided affair as my father, the Rev. E. T. Daubeny, supposes. I have killed scores of snakes myself in the jungle, and experience taught me that "that long and delicate backbone" my father speaks of, takes a great deal more breaking than one would ever imagine. What is more, the blow of a snake—especially of a huge python, is so tremendous, that it would break nearly every bone in the body of even so large an animal as that of a tiger, and leave it almost at the mercy of the python. Of course, I know that if a python lay still and allowed a tiger to do what it liked, the tiger could rip the python to pieces; but the whole idea of their fighting is, to my mind, absurd. The sight of a snake seems to almost paralyse the larger animals of the jungle. I have been on an elephant, more than once, when a small snake has been lying in the path. The effect was interesting; the elephant would stop dead and perceptibly shiver, and on being goaded by the rider would seem to wake up and to all appearances, by the trumpeting, was in a great state of mind. Suddenly the animal would rear up on its hind feet and come down with its huge front feet on the wretched snake, crushing it to a mere pulp; and it would take the elephant quite an hour to calm down from the excitement caused by the event. Suppose a tiger and a python did fight, I for one would back the python, almost for a certainty. What would happen if a tiger and a ten-foot Hamadryad (such as I have killed several times) came in contact? Of course, the tiger could easily kill him, but I know well the tiger would die too; but such a contact is impossible, because natural instinct has taught the tiger never to touch a snake. Quite apart from their poison, a snake is a much more powerful thing than many people realise. The force with which they strike is simply terrific, as I have cause to remember. Quite a small one once struck me on the boot, it was only a small snake of from fifteen to eighteen inches in length, but I can remember the pain it caused me to this day. Of course, the idea of a python swallowing a tiger is even more absurd than the idea of their fighting.

A. R. VAUGHAN DAUBENY.

504. The Cuckoo on the Wing.—It is commonly but erroneously supposed that the Cuckoo never utters its cry on the wing. It frequently does so, and a few days ago one passed me within a few yards cooing lustily and almost incessantly as it flew. By the way, the classical name for the bird (*cŭcŭlus*) is an argument for the reformed pronunciation of Latin; since the word is intended, as in English, to express its cry, and this meaning is lost by the usual pronunciation.

Buxted, Sussex, A. L. H.
June 8, 1907.

505. The Song-Thrush in Hyde Park.—Although to visitors in Hyde Park the Song-Thrush must be a notable figure, I have noticed that, beyond a cursory glance at the tree from whence he is heard singing, little attention is usually paid him. Scarcely within a hundred yards of the band on Sunday evening, June 2, a Song-Thrush, perched on the topmost branch of a slender silver birch, delighted a small audience with its clear, mellow notes. For once in a way it was a pleasure to see the people stop and listen to his song, and for some time his admirers stayed to listen in the gathering dusk, but, with the last bars of

Sullivan's " In Memoriam " that was being played by the band, the little songster flew off to another tree.

37, *Alwyne Villas, Canonbury, N.* CHAS. E. J. HANNETT.
June 5.

NATURAL HISTORY QUERIES.

124. Wrens.—In this neighhourhood there is a singular absence of common wrens this spring. Last year one seldom walked many hundred yards in the woods around this Sanatorium without seeing one or more " Jennies" hopping about, and I watched the raising of two broods just outside the wall of our policies. So far this season I have myself observed none, and have only heard of one or two birds being seen. We had an exceptionally severe winter; snow lay for several weeks, and at one time attained a depth of sixteen inches. Birds were very hard pressed for food, and I even discovered a Hooded Crow picking up scraps at a pigsty on February 13. Is it likely that almost all the wrens died during that trying period, or can have migrated to some milder part of the country?

Nordrach-on-Dee, Banchory, N.B. R. H. CROMBIE.
May 30, 1907.

ASTRONOMICAL NOTES FOR JULY, 1907.

Mars will be in opposition to the Sun on July 6, and brilliantly visible during the whole night, though at a low altitude, in the southern sky. Near Moon on the 23rd.

Saturn will rise at about 10.30 p.m. at the middle of the month. He may be observed $2\frac{3}{4}$ degrees north of the Moon on the 28th.

Uranus will be visible at any time of the night. He will be situated about $1\frac{3}{4}$ degrees south of the Moon on evening of 23rd.

Shooting Stars will be numerous from Perseus and Aquarius at the end of the month.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

NOTICE TO MEMBERS.

SEVERAL members have sent in their subscriptions without giving either a name or an address, and therefore the Secretary is unable to forward receipts. Perhaps they would kindly communicate with him.

New Members.—*Central Society.*—The following members were elected at the last Council Meeting: Henry Austin, Esq.; Mrs. Ball; Miss P. J. Barker; L. H. Barker, Esq.; Miss Ella Barratt; Ernest Beck, Esq.; Mrs. Bramwell; Sydney Cable, Esq.; Miller Christy, Esq.; Walter Cocksedge, Esq.; W. H. Daun, Esq.; Stanley E. Evens, Esq.; G. Spurrell Groom, Esq.; Miss Hargood; The Rev. Claude Hinscliff; D. Howe, Esq.; Robert Jones, Esq., M.D.; Miss Ada Kilgour; G. M. Mathews, Esq.; Alexander Payne, Esq.; Henry Perrin, Esq.; Miss Margaret Pott; Mrs. H. M. Pritchard; Mrs. E. F. Probart; William H. Such, Esq.; G. G. Trehern, Esq.; H. G. Troughton, Esq.; Henry J. Troughton, Esq.; Percival Turner, Esq.; Mrs. Ward; Cecil Worssam, Esq.

Birmingham Branch.—Mrs. Lowndes.

Croydon Branch.—Miss A. May.

Ealing Branch.—C. R. Harris, Esq.; Miss Jessie W. Harris; H. C. March, Esq.; Oscar Parker, Esq.; Mrs. Oscar Parker; Miss Saville Smith; H. S. Venables, Esq.

Farnham Branch.—The Rev. W. C. G. Bond, M.A.; Mrs. M. A. Bond; H. Bury, Esq.; Mrs. Bryan Hook; Commander Thomas B. Moody, R.N.; Cressy B. Newland, Esq.; Miss E. Ada Watts; Miss Ellen Webb.

Donation.—The Council has much pleasure in acknowledging a donation from Mrs. Probart of 2*s.* 6*d.*

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of July 15 and August 19 for the purpose of issuing books to members.

EXCURSIONS.

Saturday, June 1.—Thirteen members gathered at Woldingham Station, and in spite of heavy rain eleven started off for the walk through Marden Park to Oxted. In the absence of Mr. Mühlberg, at present touring in America, the party was guided by Mr. Matthew Hunt. The ramblers followed the ancient carriage way by the side of the Deer Park and by the hollow edge of the wood, and then left it for the footpath which mounts the south-eastern declivity of the valley to the brow of the hill where, as one emerges from the trees, the glorious panorama of the Weald is unfolded left and right and forward away to Crowborough Beacon. Then down the meadow into Hog-trough Lane, with its knotty yews and gnarled beeches and luxuriant hedge-growths, by an ancient seventeenth century cottage, Barrow Green, and by hop-fields to Oxted. Some large specimens of the Roman snail (*Helix pomatia*) were taken for domestication as pets, and in spite of the rain the walk with its fine country and beautiful views proved a very interesting one. During the afternoon the guide delivered a series of lecturettes on the literary and historical associations of the district traversed, bearing especially on Marden Park, associated with Evelyn, the Claytons and Wilberforce; and Barrow Green, with Grote and his circle.

Saturday, June 8.—About twenty Selbornians assembled at Oxshott to join in the ramble across Oxshott Heath and through the beautiful fir wood that surrounds the Black Pool, which was our destination. Mr. Poole, the Excursions Secretary, conducted the party. The Cotton Grass grew in great abundance round the pool, and we also examined *Drosera rotundifolia* which grew near the water's edge. Mr. R. H. Read drew attention to the notes of different birds. We heard the beautiful song of the Blackcap, which more nearly resembles the nightingale's than does that of any other bird.

Saturday, June 15.—The unfortunate weather that has been so much in evidence this season was responsible for the very small attendance on this day, but seven members assembled at Weybridge to meet Dr. Willson, who acted as guide. By the kind permission of Mrs. Anstey Greet, a short time was spent in the gardens at Caneswood, where palms were flowering in the open air, after which the party skirted the great motor track at Brooklands and proceeded over the fields and by charming lanes to New Haw, a pretty spot on the River Wey Navigation. After tea at the White Hart the skies cleared, and the return journey was made by way of the tow-path past Iron Mills and over Ham Moor to Weybridge.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, July 15.—Publications Committee at 5.30 p.m.

Excursions.

Saturday, July 6.—Cassiobury Park and Gardens, Watford (the Gardens by kind permission of Mrs. Peel), Whippendale Wood and Chandler's Cross. Meet outside Watford Station (L. & N.W.R.), at 3 p.m. Train leaves Broad Street at 1.45, Euston at 2.20, Willesden Junction 2.30. Cheap tickets can be taken

at Euston, 1s. 9d. return. Tea at Keeper's Cottage. Walking distance, 7 miles. Return trains leave Watford at 7.50 and 8.35. Guide, Mr. W. Percival Westell, F.L.S., M.B.O.U.

Saturday, July 13.—Visit to the Brent Valley Bird Sanctuary. Members desiring to attend must apply to the Excursions Secretary, before July 10, enclosing a stamped envelope and a remittance of 1s. to cover cost of tea. As the Sanctuary Committee does not wish to publish the exact locality of the Sanctuary, details will be sent only to those who apply as above.

Saturday, July 20.—Coulsdon and Farthing Downs. Train leaves London Bridge (S.E.Ry.), at 2.20 p.m., Charing Cross at 2.12 p.m. Take return tickets to Coulsdon, 2s. Guide, Mr. Matthew Hunt.

Saturday, July 27.—Marlow and Skirmitt. Visit, by kind invitation, to the menagerie of British Carnivorous Mammals (wild cats, martens, badgers) belonging to Mr. Alfred Heneage Cocks, M.A., F.S.A., F.S.S. Train leaves Paddington at 2 p.m. Members will drive from Marlow to Skirmitt and back, fourteen miles. Members wishing to attend must notify the Excursions Secretary before July 23, enclosing remittance of 5s. 9d. to cover cost of train and drive. The Excursions Secretary will take all tickets and meet members on the platform at Paddington ten minutes before the departure of the train.

Saturday, August 3.—No excursion, on account of the August Bank Holiday.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Honorary Excursions Secretary*, at 16, Heathcote Street, W.C.

We are asked to announce that there is to be an all-day excursion from London to Wrotham (for Ightham), on Monday, August 5, visiting Ightham Mote and Church, and also the celebrated fissures and rock shelters. The district abounds in geological and antiquarian interest.

All members of the Selborne Society are invited to join. Those wishing to do so should write, by July 20, to Mr. K. W. Mumford, of Kirby Lodge, Hardy Road, Blackheath, who will furnish all particulars.

ANSWERS TO CORRESPONDENTS.

Lady Jenkyns.—The oak twig was attacked by two galls, the currant-gall of *Neuroterus baccarum* on the catkin, and the woolly gall of *Andricus ramuli* at its base. The latter is the less common.

Mrs. Needham.—*Amelanchier canadensis.*

---

1. All communications for Nature Notes must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for Nature Notes (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. Boulger, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. John Bale, Sons and Danielsson, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, Wilfred Mark Webb, F.L.S., at 20, Hanover Square, London, W.

JUST PUBLISHED.

4to. Beautifully illustrated with 38 full-page Plates and a 5-figure 15-inch coloured Manikin and Key showing all the organs of the body. Price **12/6** net.

By Eugen Sandow.

Construction and Re-Construction of the Human Body,

Being a descriptive account of his System of Cure by Physical Exercises, with an Introduction

By Dr. Sir A. Conan Doyle.

JOHN BALE, SONS & DANIELSSON, LTD., 83-91, Gt. Titchfield Street, W.
And at all Booksellers and Libraries.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY
J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

The Rambles of an Australian Naturalist.

By PAUL FOUNTAIN, Author of "The Eleven Eaglets of the West," &c. From the Notes and Journals of THOMAS WARD. Demy 8vo, 10s. 6d. net.

"This is a quite delightful book; a book so compact of outdoor natural lore as to leave the reader, though his feet have never left English soil, with a feeling of intimate familiarity with the outdoor life of Australia. A volume that, in every page, is eminently readable and interesting, apart from the fact that it is literally packed with information and the knowledge which can come only from practical experience to one naturally gifted as a student of out-door life . . . . it would not be easy to name a more comprehensive description of outdoor Australia than this book. We hope it will reach a wide audience in England. The work in every way deserves success. It is little likely to disappoint any reader, and it will prove the most delightful reading to all who have ever visited the Antipodes."—*Standard.*

JOHN MURRAY, ALBEMARLE STREET, W.

In square crown 8vo, tastefully printed and bound. Price **6s.** net.

Flowers and Trees of Palestine.

A Short Account of some of the Flora of that Country.

BY AUGUSTA A. TEMPLE.

Illustrated by 40 Photographs from nature, with an extended Glossary of Flower Names.

CHEAP EDITION. In crown 8vo, tastefully printed and bound, **2s. 6d.**

Literary Celebrities of the Lake District.

BY FREDERICK SESSIONS.

"The book is one to send the visitor away to the Lake district with renewed zest, and enhance his glowing recollections when he returns."—*Pall Mall Gazette.*

"The volume is intelligently written, well illustrated, and attractively bound."—*Record.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

CASES FOR BINDING

NATURE NOTES

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

PRICE 1/1 NET, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd., 83-91, Gt. Titchfield St., London, W.,

They will be pleased to bind same in Cases on receipt of **1/3** net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

No. 212. Vol. XVIII. August, 1907

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

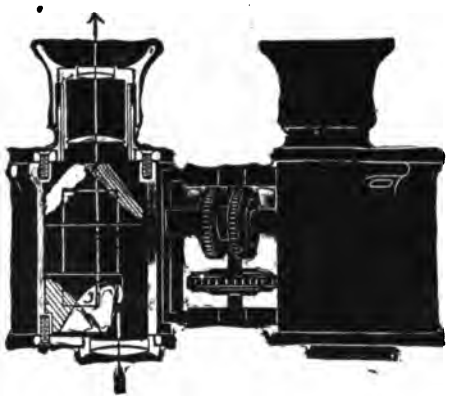
	PAGE
SELBORNIANA	141
REVIEWS AND EXCHANGES	142
NATURAL HISTORY NOTES.—At Liberty in the Zoo.—Do Dogs Eat Carrion?—Canada Geese.—A Garden Full of Birds.—Birds in Towns.—Bird Protection *v.* Bird Destruction.—The Cuckoo's Notes.—A Kestrel at Close Quarters.—Bird Instinct.—Common Wrens.—Nature's Surgery.—Pythons.—A Few Nature Notes.—Wasps.—A Plucky Wasp.—Spider.—What is a Perennial?—Plant Freaks.—London Plants.—Unlovely Scenery	149
NATURAL HISTORY QUERIES.—Bee Orchid.—A Stone with Curious Markings.—New (?) Orchid on the French Riviera	156
ASTRONOMICAL NOTES FOR AUGUST, 1907	157
SELBORNE SOCIETY NOTICES	157
ANSWERS TO CORRESPONDENTS	160

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

The Naturalist's Field Glass.



GOERZ TRIEDER BINOCULARS.

HIGH POWER. LARGE FIELD.
LIGHT AND COMPACT.

♠ ♠ ♠ ♠

THREE OPINIONS.

"For my own special use. . . . . I have found it absolutely the best I ever looked through."—F. G. AFLALO.

"With my glasses—the GOERZ Trieder Binocular No. 30, 9x—I have been able to distinguish sea-birds on their nests two and a half miles away; at a distance of a quarter of a mile a bird the size of a sparrow can be recognised. No better aid for observing such far-away objects can be obtained or desired."—Mr. OLIVER G. PIKE, in *Woodland, Field, and Shore.*

"I was the happy possessor of a pair of GOERZ Trieder Binoculars. Every one praises his own glass, but of all those I have tried *none has been so good as this glass for my purpose.*"—Mr. HARRY F. WITHERBY, F.Z.S., M.B.O.U., writing in *Knowledge* upon his Ornithological Tour through the Soudan.

OF ALL OPTICIANS. DO NOT ACCEPT SUBSTITUTES.

LIST No. 96 FREE ON APPLICATION TO—

C. P. GOERZ, 1-6, Holborn Circus,

LONDON, E.C.

ALL RIGHTS RESERVED.

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 212. AUGUST, 1907. VOL. XVIII.

SELBORNIANA.

SALE OF WHITE'S MANUSCRIPT.—The manuscript of "The Natural History and Antiquities of Selborne," which was exhibited at our recent Conversazione, was sold at Sotheby's on July 1, and fell to Mr. Harford for £750.

SUGGESTED SECTIONS OF THE SELBORNE SOCIETY.—The Council has for some time had before it a suggestion that the work of the Society could be done much more efficiently if sections were formed, consisting of Members specially interested in each particular object. For instance, one group of Members might deal with the protection of plants, another with the question of the wearing of feathers, a third with the preservation of ancient buildings, a fourth with that of places of natural beauty, a fifth with general amenities, and so on. The matter has now been referred to the General Purposes Committee, and it invites Members who are interested in any matter coming within the Society's objects, whether mentioned above or not, to communicate with the Honorary General Secretary, so that a report may be made to the Council as to the possibility of carrying out the idea.

CROSBY HALL SAVED.—Whilst at the beginning of last month we were in despair, hearing that the bank which had purchased the site were not willing to part with it, just as we are going to press we hear the very satisfactory news that an exchange of sites has been arranged. Crosby Hall, in the preservation of which the Selborne Society, in common with most societies of cognate interests, has been actively participating, is thus saved from the destruction which seemed inevitable.

THE BRITISH ASSOCIATION.—Quite a number of Selbornians will be present at the meeting of the British Association at Leicester this year. The President elect is Sir David Gill,

K.C.B., and the meeting opens on July 31. Leicester is easily reached from Marylebone Station, and the Great Central Railway Company is issuing return tickets at a fare and a quarter.

REVIEWS AND EXCHANGES.

Flowers of the Field. By Rev. C. A. Johns. Revised throughout and edited by Clarence Elliott. Routledge. Price 7s. 6d. net.

In the advertisement of this book on the cover of NATURE NOTES, it is described as *A really trustworthy popular guide to the Wild Flowers of Britain, up-to-date in its text and representative of the latest methods of coloured book illustration.* We regret to say that it fails to realise this laudatory announcement. The introduction contains all the old errors of "Johns," such as underground *stems* being described as *roots*, the *embryo* being called a *seed*, and then confounded with its own *plumule*, certain *fruits* are called *seeds*, &c. It is thus by no means "up to date"!

With regard to the text several species are omitted. The slight verbal alterations Mr. Elliott has made are of no special significance, but he has cancelled the whole of the two important families of Grasses and Sedges! He has, however, introduced the word GLUMACEÆ (to which these two families belong) over *Juncaceæ* (Rushes); and then headed every left-hand page to the end of the book, GLUMACEÆ, therefore leading the student to imagine eight families (persistently miscalled "tribes") to be of that group, whereas not one of them is so; yet the book is described as "trustworthy."

Mr. Elliott has also cancelled all the accents, a most important help to the pronunciation of Latin names for beginners. Why he gratuitously places *Diplotaxis* under *Cardamine* we do not know. He also misspells *sceleratus*.

With regard to the illustrations, we presume the plates with small coloured figures are supposed to be an attractive feature, but the value of Johns' large wood-cuts is greatly sacrificed by their being much reduced in size, as embodied in the text. We have compared this edition with Johns' original one, as well as the latest issued by the S.P.C.K., edited by Professor G. S. Boulger, the skilful and exact Editor of NATURE NOTES; and we find—omitting the allusion to coloured plates—the above italicised paragraph is strictly applicable to the latter. The Families are arranged in the sequence adopted by our leading botanists, the Grasses and Sedges being in their right place at the end, while the best of the full-sized figures are retained.

We cannot, therefore, agree with the "Opinions of the Press," quoted under the advertisement, nor do we consider it justifiable to include it under the general heading "New Nature-Study Books." It is simply a reprint of an old book, good enough in its day, but to re-issue it with all its defects—at the present time they have become *serious* ones—is *not* what Nature Study requires. We do not hesitate to say that its "attractive features," if we may so style them, as resting upon "colour," are of no real value to the student.

The Wit of the Wild. By Ernest Ingersoll. 7¾ inches × 5½ inches, Pp. 288. Illustrated. T. Fisher Unwin. Price 6s.

This is a collection of disconnected chapters on animal life, mostly that of the snakes, birds and beasts of North America. They are mostly reprinted from the New York *World* and *The Field*, and are told in simple attractive style and illustrated by a large series of excellent photographic pictures. Printing and binding are all that can be desired.

Woodlanders and Field Folk: Sketches of Wild Life in Britain. By John Watson and Blanche Winder. 8¼ inches × 5½ inches. Pp. 304. With 40 Illustrations. T. Fisher Unwin. Price 5s. net.

Dealing as it does with our own fauna, this volume is, perhaps, more attractive than the last mentioned. In some three hundred pages of clear type we

have upwards of fifty chapters dealing with birds, mice, deer, foxes, otters, badgers and such inhabitants of truly wild spots. There is nothing to indicate what share each auther had in the work, neither is there any index, as in a book referring to so many animals there should have been. "Fungi" is not a noun

WILD CATS.
(From photo by C. Reid, from "Woodlanders and Field Folk," by kind permission of Mr. T. Fisher Unwin.)

singular, though it is treated as such on p. 5; but in general there is no fault to find with the way in which much obviously first-hand observation is conveyed to the reader. The illustrations, two of which we are able, by the courtesy of the publisher, to reproduce, are by several different photographers, but maintain a very high level of excellence. To the townsman such a volume as this, with its breezy air of rural solitudes, is particularly refreshing.

YOUNG FOXES.

(From photo by C. Reid, from "Woodlanders and Field Folk," by kind permission of Mr. T. Fisher Unwin.)

Flowers and Trees of Palestine. By Augusta A. Temple. 8 inches × 6 inches. Pp. 172. With 40 Illustrations from Photographs taken by the Author. Elliot Stock. Price 6s. net.

Many Biblical students, Sunday School teachers and tourists in the Mediterranean will be glad of this unpretentious work, which is professedly based on the more learned writings of Canon Tristram and Dr. Post. Chapters on the flowers, thorny plants, tropical and alpine plants and trees of Palestine, in which much information has been collected, are followed by an alphabetical list with descriptions of the genera, the fulness of which may be gathered from the fact that it occupies nearly 130 pages. This has been carefully compiled, though the proofs should have been revised by a botanist. The illustrations, of which Mr. Stock allows us to reproduce two specimens, add considerably to the attractiveness of a pleasing volume.

ANEMONE CORONARIA. "Lilies of the Field."
(From Miss A. A. Temple's "Flowers and Trees of Palestine," by kind permission of Mr. Elliot Stock.)

ACANTHUS SYRIACUS.
(From Miss A. A. Temple's "Flowers and Trees of Palestine," by kind permission of Mr. Elliot Stock.)

Bulletin of the British Ornithologists' Club, Vol. XX.: Report on the Immigrations of Summer Residents in the Spring of 1906. 8¾ inches × 5¾ inches. Pp. 190. Illustrated by 34 outline Maps. Witherby and Co. Price 6s. post free.

We called attention last year to the very useful task which the British Ornithologists' Club are performing in accurately tabulating the routes taken by our migratory birds. All students of bird-life will find this Report of the second year's work of the Committee an interesting supplement to that issued last year; and, when we add that all the profits of the sale of this Report go to the furtherance of the work, it will be seen that it is the duty of every ornithologist to support that work by purchasing a copy.

Twenty Country Rambles round Leeds. By John Hornby. 6½ inches × 4¼ inches. Pp. 64. With 8 Illustrations. W. Brierley, 3, Bond Street, Leeds. Price 6d. net.

We are very glad to see this proof that the rambling spirit of those "in populous city pent" is not confined to the Metropolis, and that those disposed to ramble have a "guide, philosopher and friend" ready to their hand. All the walks described are within an afternoon's walk; and, though often relieved by a little pleasant gossip, Mr. Hornby's directions seem to have all the necessary minuteness of "Walker Miles."

The City of St. Alban: Its Abbey and its Surroundings. By Charles H. Ashdown. With Ordnance Map and Plans. 7¼ inches × 5 inches. Pp. 152. Homeland Association. Price 1s. net.

Originally issued five years ago, this guide book has now been carefully revised by the Author. As we have remarked on another occasion, the Homeland Association, by the general excellence of their publications, have created the criterion by which their work must be judged. They not only endeavour to secure a resident as author, but the manufacture of the book is also generally local, and in this case we can confidently say that writing, illustrating and printing have alike been in the best hands. Such is the wealth of St. Albans in historical and archæological interest that we feel we cannot grumble if natural history has been crowded out of a book planned on this modest scale.

Bury St. Edmund's, with its Surroundings. By W. A. Dutt. With Ordnance Map. 7¼ inches × 5 inches. Pp. 76. Homeland Association. Price 6d. net.

On the principle just enunciated we are bound to say that this Bury guide hardly comes up to the Association's high standard. Mr. Dutt had an abundance of material, no doubt, from St. Edmund and Abbot Samson to Mr. Pickwick, but we did expect to learn more of the Gages and Cullums, and of the history of the Botanic Garden. Our more serious complaint, however, is of the printer, the illustrations being uniformly too faint. There is, however, no one volume which contains so much information about the most interesting East Anglian monastery and its surroundings as does this.

Birds and their Nests and Eggs found in and near Great Towns. By George H. Vos. Illustrated by reproductions of photographs of each bird, its nest and eggs, made by the author from Nature, and of incidental scenes. 7½ inches × 5 inches. Pp. 148. Routledge. Price 1s.

This is certainly an inexpensive book, strongly bound in cloth as it is. The type and the illustrations from stuffed birds suggest that the volume is intended as a school "reader"; but the author's language, when, for instance, he writes of the precaution of a duplicate exposure, and attributes "the combative manners of this little featherweight fighter to the instinct of self-preservation," is hardly suitable for the very young. Nineteen species are described, found within sixteen miles north of the centre of London, and their eggs are figured natural size, whilst some of the landscape pictures also are very good.

The Birds of Bampton Cliffs: A Concise Description of the different species of Wild Birds that frequent the Chalk Cliffs, with full details respecting the habits of the Guillemot. By E. W. Wade. Second Edition. 7¼ inches × 5 inches. Pp. 41. With eighteen illustrations. A. Brown and Sons. Price 1s. net.

An admirable little monograph on the "cliff-climming" of the East Riding, creditable alike to author and to publisher.

The Insect Hunter's Companion. By the Rev. Joseph Greene. Revised and extended by A. B. Farn. Fifth edition. 6½ inches × 4¼ inches. Pp. 120. West, Newman and Co. Price 1s. 6d.

When a book of this class has reached a fifth edition praise may seem superfluous; but for those who do not know the late Mr. Greene's work we may say that it is difficult to conceive a more complete manual on collecting and preserving insects of all kinds. The book is strongly bound in cloth and has a good supply of blank pages for notes.

Leaf Folding. By Mrs. Beverley Ussher. A Series of 12 Designs in Packet, with Descriptive Notes. 8 inches × 6½ inches. George Philip and Son. Price 8d.

This is a set of outline drawings for children to cut up, colour and roll or fold in imitation of buds. We have tried the experiment with very little children, and believe that it is an admirable Nature study for a wet day in spring.

The University of Colorado Studies. Vol. IV., No. 3. 10 inches × 6½ inches. Pp. 72. Price 50 cents.

This number contains, *inter alia*, a description of an expedition to North-Eastern Colorado, Part II. of Junius Henderson's Mollusca of Colorado, comprising a well illustrated account of the Gastropoda, and Part II. of Dr. Ramaley's Silva of Colorado, comprising the genus *Populus*.

The Country Gentleman's Estate Book, 1907. Edited by W. Broomhall. 10 inches × 6 inches. Pp. 568. Country Gentlemen's Association. Price 10s. 6d.

Among papers likely to interest our readers in this portly annual volume are Mr. Leslie Wood's prize essay on the Adaptation of Land for Afforestation, a short paper on Vandalism in Private Parks, and Dr. Gilbert Slater's learned paper on the Inclosure of Common Fields.

Spring Harbingers and their Associations. By M. G. B. 7⅜ inches × 5¼ inches. Pp. 62. Elliot Stock.

Six slight little poetical appreciations of the snowdrop, violet, daffodil, cowslip, daisy and rose.

The Days of a Year. By M. D. Ashley Dodd. 6½ inches × 5¼ inches. Pp. 173. Elkin Matthews. Price 2s. 6d. net.

The writer describes this as "the 'Nature Diary' of one who is not a naturalist." Under July 23 we find, "After long drought the moist sweet smell of rain," and under the 26th, "The arrow flight of swallows, swift and keen." We cannot imagine such subjective platitudes being of any interest to any one but the author.

Roses. By T. W. Sanders. *Garden-Making.* By E. O. Greening. Agricultural and Horticultural Association. Price 1d. each.

These two new numbers of the remarkable "One and All" garden books, fully maintain the repute of the series for sound, practical guidance, abundant illustration and phenomenal cheapness.

Guide to the Wilberforce Museum, Hull, and *Quarterly Record of Additions,* Nos. XX. and XXI. By T. Sheppard. A. Brown and Sons. Price 1d. each.

We must congratulate that most assiduous of museum-curators, Mr. Sheppard, on his continued enterprise and success in arresting attention. The reproduction of Richmond's portrait of Wilberforce, although the artist's name has been

omitted, is alone worth more than the modest price of the guide, whilst the quarterly records contain a variety of interesting notes, too great for us to attempt even an enumeration.

Morale de la Nature. Par M. Deshumbert. D. Nutt. Price 1s. net.

This is an attempt to construct a system of elementary ethics on cosmical evolution. The following sample will suffice: "La fleur, pour avoir des enfants vigoureux, c'est-à-dire afin de donner aux générations futures le pouvoir de vivre normalement leur Vie, et dans un but purement altruiste, la fleur refuse de se féconder elle-même." Such nonsense as this attribution of altruism to flowers might mislead a child into illogical and unscientific paths, were it not too puerile to produce any effect.

Pyrenean Geology. By P. W. Stuart Menteath. Parts VII. and VIII. *Darwinism and the Convictions of the Monkey Mind.* 27 pp. Dulan and Co. Price 6d. *Sur les Méthodes de la Nouvelle Géologie.* Par P. W. Stuart Menteath.

Mr. Stuart Menteath is very angry with the shades of Darwin and Huxley, and apparently with most scientific men, living or deceased, so angry, in fact, that he has no time to give us any coherent contribution to Pyrenean geology.

The Book of the Open Air. Part II. Hodder and Stoughton. Price 1s. net.

The second part of this sumptuous work maintains the credit of the first. Mr. Tregarthen's "Life Story of a Badger," Mr. Patterson's "Bird-watching in a Breydon Punt," and the commencement of Mr. Hudson's "Advice to Adder-Seekers," in the text; and Mr. Pike's "Grebe" and Mr. King's "Beeches" among the five coloured plates may, perhaps, be specially mentioned among a series of contributions, all of which are of interest.

British Birds: an Illustrated Magazine devoted to the Birds on the British List. Edited by H. F. Witherby, assisted by W. P. Pycraft. Nos. 1 and 2, June and July. Witherby and Co. Price 1s. net monthly.

This is a welcome addition to our ornithological serials. As might be expected from Messrs. Witherby, paper and print are all that can be desired; while, if the editors' names alone were not sufficient guarantee of sound matter, those of Drs. Bowdler Sharpe, P. L. Sclater and the Hon. Walter Rothschild, of Messrs. Howard Saunders, J. H. Gurney, W. E. Clarke and F. C. Selous among the contributors, most assuredly are so. Mr. P. H. Bahr contributes "A Study of the Home Life of the Osprey," illustrated by a series of excellent plates from his own photographs; and No. 2 has as frontispiece a first-rate photogravure of the late Professor Newton, whose death has made so serious a break in the ranks of our senior students of bird-life.

Proceedings of the South London Entomological and Natural History Society, 1906-7. With 4 plates. Price 2s. 6d.

This active Society sends out a typical annual volume, with an interesting address by their President, Mr. Adkin, and full reports of their field meetings. Notes from Adelboden, Switzerland, and on West Indian Crustacea, would seem to be painfully out of place in a South London publication were they more than brief abstracts, and "Notes on the Butterflies of Saskatchewan" is rather longer, and therefore even less appropriate in its place of appearance.

Dew-Ponds. By E. A. Martin. Reprinted from *Knowledge* for May and June. Illustrated. Pp. 12.

Mr. Martin has rendered a valuable service to naturalists in south-east England by collecting and sifting the evidence on this old-time question.

Nature Reader Monthly. By F. H. Shoosmith. Pp. 32. Illustrated. Charles and Dible. Price 1d.

We have received the numbers of this "Reader" for July and August, which are remarkable productions for the price. They contain very good and numerous illustrations, and deal with subjects of such varied interest as climbing plants, frogs, toads and newts, the salt and tides of the sea, butterflies and moths. The information is accurate, but perhaps there is too much of it administered directly in large doses, and a good deal of too learned language.

Surely "poikilothermal" is out of place, even in a note, in such a publication, and so is the Doctrine of Signatures, even if carbon-dioxide and evaporation are admissible. We should have preferred more recognition of the heuristic principle.

The Cinematograph in Science, Education, and Matters of State. By Charles Urban. Pp. 56.

Considerations of expense will probably long prevent the general introduction of the cinematograph into class teaching, or the preparation by the ordinary teacher of his own films, but this pamphlet, though doubtless in great measure a trade circular, demonstrates how much has been already done to make this instrument of real scientific use in biology and medicine.

The Young Citizen for March. Edward Lloyd, Limited. Price 1d.

As we were walking along Fleet Street a short time ago we were filled with momentary indignation at the sight of several glazed cases in a window each containing two dozen butterflies, including the Scarce Swallow-tail, the Camberwell Beauty and the White Admiral. These cases were to be given away in exchange for coupons cut from *The Young Citizen*. For the moment we doubted whether even the wholesale slaughter of continental specimens could supply such gems at such a rate, for the case was advertised at half-a-crown; but we rubbed our spectacles and found with much satisfaction that we had been taken in. The butterflies are admirably printed in colour and life-size on cardboard, cut out and mounted, and here in the *The Young Citizen* each species is briefly described. Such a collection forms an excellent present for a young Selbornian.—*Board of Agriculture Leaflets.*

Among the leaflets recently issued by the Board of Agriculture and Fisheries which are likely to interest our readers are—No. 169 on The Cultivation of Mangolds, No. 170 on The Uses of Lime, No. 184 on Red, White and Alsike Clovers, No. 186 on The Large Larch Sawfly, and No. 195 on The American Gooseberry Mildew. Any of these may be obtained gratis and post free from the Board, 4, Whitehall Place.

RECEIVED.—The summer number of *Bird Notes and News*; *The American Botanist* for May; *The Victorian Naturalist* and *Bird-Lore* for May and June; *The Humanitarian* for June; and *The Naturalist, The Irish Naturalist, The Animal World, The Animals' Friend, The Agricultural Economist* and *The Estate Magazine* for June and July.

NATURAL HISTORY NOTES.

506. At Liberty in the Zoo.—No cage, no label, and unfettered freedom! Such are the privileges enjoyed by two little grey squirrels in the gardens of the Zoological Society at Regent's Park. All day long the visitors who come and go are amused at the playful antics of these furry creatures, and by their friendly attitude to all, they have created numerous admirers. No matter what food is offered them it is readily taken from the giver's hand with but little show of timidity, and then, off they scamper to some distance away to eat it. A thing that interests many people is to see them bury the nuts, and this they do in all places. There may be some who wonder at the contrast presented by the uncontrolled freedom of the squirrels and the captivity of their brethren; but there are species of the animal kingdom in the Zoo which, on being given their liberty, would create wholesale panic and destruction.

37, *Alwyne Villas, Canonbury, N.* CHAS. E. J. HANNETT.

507. Do Dogs Eat Carrion?—In reply to the query on this subject I may say that last summer a sheep died in the pasture close under our garden wall. Being the height of the hay season the men were too busy to bury it, and in view of the intense heat we feared a nuisance. The sheep dogs, however,

discovered the carcase directly, and dragged it a distance of about twenty yards. Together with a pair of carrion crows they had left nothing but bare bones at the end of a couple of days. In this district, if a lamb dies, the body is always hung up in a tree to be out of reach of the dogs.

Llanbedr, Vale of Conway. ANGELA BRAZIL.

508. Canada Geese.—These birds turn up about here now and then, having probably strayed from Holkham, where they breed. A few weeks ago I saw one on Narford Lake, where it was so chased and hustled by a swan as to render its stay improbable. Since then a pair settled in a field in this village, but soon left. The man who saw them felt very much inclined to take their lives, but luckily desisted, not knowing what they were. I hope they have given up wandering, and safely returned to their home on the coast, some twenty-five miles off, where every care is taken of them.

EDMUND THOS. DAUBENY.

509. A Garden Full of Birds.—There is no spot of its size with which I am acquainted that contains a greater number and variety of birds than my own premises. Within 30 yards of the house, and in a space less than 100 yards square, the following birds make their home:—

Pheasant.	Turtle-Dove.	Linnet.	Gold Crest.
Partridge.	Great Tit.	Lesser Redpole.	Hedge-Sparrow.
Missel-Thrush.	Blue Tit.	Chaffinch.	Chiffchaff.
Thrush.	Cole Tit.	Greenfinch.	Sedge-Warbler.
Blackbird.	Nuthatch.	Bullfinch.	Garden-Warbler.
Starling.	Creeper.	Goldfinch.	Blackcap.
Swallow.	Spotted Flycatcher.	Sparrow.	Whitethroat.
House-Martin.	Pied Wagtail.	Robin.	Lesser Whitethroat.
Wood-Pigeon.	Tree-Pipit.	Wren.	Willow-Wren.

I am surrounded by a halo of music from the throats of numerous lovely songsters. With the exception of game birds, wood-pigeons, turtle-doves, an occasional thrush or blackbird, and those that build in holes, the birds in the above list rarely nest in the extensive coverts that reach to within 60 yards of the house. Little birds are learning more and more to avail themselves of the protection that man affords them during the breeding season. The presence of human beings, dogs and cats, gives protection to the small birds on my premises which they do not obtain a little further off. My trees and bushes are not searched day after day by squirrels like those in the coverts are; for squirrels are very afraid of dogs and cats. Even the jackdaws, which build in the church across the road, and take terrible toll of the eggs and young of little birds, draw the line at my premises, in which a gun is never used, and seldom dare to trespass, while the kestrels in the church tower never interfere, and seek their food in more open ground. Two or three years ago the keepers did not know the squirrels' habits, and were sceptical when I told them. Last spring one of them informed me that his mate and he had, independently of each other, caught squirrels in the act of eating young birds, and that I was right after all. My garden supplies me with abundance of flowers, fruit and vegetables.

South-acre, Swaffham, EDMUND THOS. DAUBENY.
May, 1907.

510. Birds in Towns.—There appear to have been greater numbers than usual of wild birds driven into the large towns this last winter during the spell of severe cold. Your June correspondent cites the Redstart as one. In Brighton many Redwings were observed in the public gardens close to the main thoroughfare. The poor birds were, I noticed, scratching frantically at the frozen ground for food, and so tame they could easily have been captured. Thirteen of them were picked up in one garden north of the town, killed by cold and hunger.

9, *Park Crescent, Brighton,* EMMA M. NICHOLSON.
June 21, 1907.

511. Bird Protection *v.* Bird Destruction.—At the annual meeting of the Royal Society for the Protection of Birds, the Chairman is reported as saying in the course of his remarks that, "In such a matter as bird protection the only

way in which they could get any practical results was to take care that in all they did they acted in accordance with the general trend of public opinion." Now in this matter great stress has been laid on the importance and necessity of educating the rising generation, but it would appear that, in view of recent events, we are likely to have practical results of a very negative kind. The May number of these notes contains a paragraph quoted from the *Birmingham Daily Post* on the destruction of starlings, but this is only one of the numerous cases that have been appearing in the papers for many weeks past, in all parts of the country. Farmers and fruit growers are raising funds and forming clubs for the purpose of waging war against certain kinds of birds, especially sparrows and starlings, which are supposed to be destructive to crops. I have before me no less than five notices of such clubs from a single paper. Various sums of money are offered for old and young birds and eggs, a common method being to pay so much per head for the sparrows' heads produced, and in some localities nothing short of extermination is aimed at—two of the reports are, in fact, so worded. Whether reduction in the number of birds be necessary or desirable is at least open to question and of doubtful benefit, but the method of procedure is one that may easily develop into a serious evil. The production of sparrows' heads and eggs will practically devolve upon the children of the working classes. The average school-boy is already endowed by nature and surroundings with sufficient destructiveness to make him empty every nest he finds, from sheer love of mischief and wrong-doing, but when to this is added the temptation of augmenting, in a very easy, and, to him, enjoyable way, his store of pocket money, we may well ask where the matter will end? The head of a sparrow does not differ very much from that of any other small bird, and neither the farmer nor the small boy are likely to be over particular in differentiating between protected and unprotected birds, when both parties are equally interested in their destruction. In fact, all are "sparrows" that come to their net, and of what possible use, we may ask, is any amount of education, and any number of protection notices from the county councils, in face of such temptation? In several cases of published results, the number of birds destroyed amounts to over 2,000 in one season. Then we have the case of the "professional poisoner of birds," who was summoned on the 30th ult. at Fakenham, along with three farmers, by the R.S.P.C.A., for killing birds by means of poisoned grain. The result of his operations was that "a barrow-load of dead birds *of all kinds* was picked up on the following morning." It is satisfactory to learn, however, that this miscreant, who confessed that he had carried on the business for twenty-five years, was sent to gaol for fourteen days in default of paying a fine of £1 and costs. Another paper informs us that the few ravens that still nest in Cumberland are on the point of extinction, owing to the continual persecution of egg collectors, "protection" notwithstanding. An agricultural report is advocating a crusade against bullfinches, wood-pigeons, rooks and starlings. In this sordid age, everything appears to be reduced to the level of money-making, but our wild birds (or what is left of them) are a national property of undoubted use, and a source of delight to many, and a minority, be they farmers, fruit growers or egg collectors, ought not to have the right or power to exterminate them, nor to adopt measures which may indirectly lead to such a result. W.

512. The Cuckoo's Notes.—It is well-known that the Cuckoo in June changes his tune, generally from Cuc-koo to Cuc-cuc-koo, though this year I have heard it cuc-cuc-cuckle-cuckle-cuc-koo, but it is not, perhaps, so generally known that the bird has two other notes, or rather utterances, of quite a different character. One is a peculiar gurgling sound, continued for perhaps half a minute, and the other a harsh rasping "caw," not altogether unlike that of a crow. I have listened to both these sounds as I have watched the bird, and it has been as often when the bird is flying as when stationary.

I can confirm from frequent observation the statement of A. L. H., that the usual cry is frequently uttered on the wing.

Perhaps some of your correspondents might be able to say something of the other utterances I have mentioned. The gurgling sound I believe to be peculiar to the pairing season.

R. MILBURN BLAKISTON, F.S.A.

The Deanery, Hadleigh, Suffolk.

513. A Kestrel at Close Quarters.—A somewhat similar thing to that mentioned in the June NATURE NOTES, happened at a window in our house a few years since. A sudden crash of glass into the room where we were sitting startled us, and on going to the window, even with the ground, we found a sparrow-hawk with wings outstretched lying on the tiles in front of it; one of us went outside, and immediately the bird flew up, releasing as it did so a sparrow; the latter flew off to the shrubbery and the hawk to the rookery near. Doubtless the bird mentioned by E. A. Bedford was a sparrow-hawk and not a kestrel, a bird which would scarcely venture so near a dwelling.

Teignmouth. CAROLINE E. HARLEY.

514. Bird Instinct.—I had a very interesting example of bird instinct this voyage. Some swallows came on board crossing the Bay, and I managed to drive them into my room to keep them from being devoured by our cats. In the morning they quietly flew out when I opened the wire door. That evening they roosted again in my room, but the next morning were vastly excited, flying about the room, twittering loudly. As soon as I opened the door out they went, and made a bee line for the land. Finisterre was nearest, about 110 miles off, and they went in that direction and I saw them no more. Now, how did they know where it was from my dimly lighted room? The blinds were down so they could not see out, but they knew right enough.

515. Common Wrens.—A correspondent in the July number remarks on the singular absence of common wrens this spring. This is equally noticeable in many parts of the North of England, especially one place where they are usually very abundant, but this year a whole week may elapse without their song being heard.

Pied flycatchers, on the other hand, have been unusually numerous in some of the localities they frequent. The writer came upon no less than six pairs in the course of an afternoon's walk of a mile and a half in May, and as they were seen or heard about the same spot on the return journey, it is reasonable to suppose they were nesting in the immediate neighbourhood. Directly the young leave the nest, however, both old and young disappear and are no more seen. What then becomes of them? The spotted flycatcher remains through the summer. W.

516. Nature's Surgery.—One of my thrushes had its leg torn off by, I presume, a cat, which could get on the top of the cage and pass its paw through the wires (which are wide apart) and reach the bird. It must have been done one night, for in the morning I noticed feathers about, but the bird was hopping about on one leg as if nothing had happened. I killed it in the evening and found the limb gone, the feathers and blood had formed a complete binding to the wound, and no doubt in time all would have been right. JOHN ACUTT.

517. In November of last year I noticed a rook with its left leg broken and dangling from its body. Since then and almost daily up to the present time I have seen that same rook, and it is still in the same condition as when I first saw it. So this poor bird has managed to exist and support the weight of its body for at least six months on one leg, and seems able to take pretty good care of itself. I have noticed when alighting on the ground or on a tree it gets no relief whatever from the broken leg, which is still absolutely useless.

27, *Hampstead Road, Brighton,* JOHN HORNE.
June 5, 1907.

518. Pythons.—It is refreshing to see the way the discussion is tending with regard to the stretching powers of the gullet of the largest snakes. First it was a tiger that could be swallowed. Then it dwindled down to a leopard. After this Mr. Nicholson whittled it down to "one of the smaller cats," perhaps a tiger cat; which is not too large to be swallowed by a good sized python. I am glad to see my son's experiences of snakes in Burma related in your pages. He takes rather a lofty view of a snake's powers when he tells us he would back a python to master a tiger in mortal combat, and that "it would break nearly every bone in the body of even so large an animal as a tiger." An elephant might perform such a feat by jumping for an hour upon a tiger's body after the

manner his did upon the little snake. He also says, "natural instinct has taught the tiger never to touch a snake." Flower and Lyddeker are my authority for saying, "from the fact of three or four feet of a huge snake having been found in a tiger's stomach, we may conclude that tigers are not so averse to attacking snakes as is generally supposed." Domestic cats sometimes kill snakes. I have known individual cats much addicted to this habit.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

519. A Few Nature Notes.—Half a century ago, as a boy lover of Nature, I roamed through the fields daily, wading in the brooks, breaking through the hedges and climbing the trees. These experiences formed pleasurable incidents and sometimes provided interesting objects for study. The note-books I kept at the time have long since disappeared, but a few recollections are still vividly fresh in the memory. On one occasion I found a Carder Bees' nest in a bank overgrown with long grass. The nest, enclosed in dried grass, much the same as that collected by field-mice, was fairly large. On being about to remove it I found two slow-worms snugly wrapped up in its outer layer. In 1858 I discovered a Humble-Bees' nest in a hole in a steep bank bordering a brook. I proceeded to destroy the outside bees preparatory to digging out the nest. I was surprised to have to encounter wasps as well as bees. On digging, I discovered the comb of a small wasp's nest with queen, &c., complete. Excavating the run of the hole about a foot further I came upon the moss and interior cells forming the Humble-Bees' nest. At various times I must have taken in the aggregate hundreds of nests of Wasps and Humble Bees, but never except on the solitary occasion alluded to found them inhabiting the same hole, and am inclined to believe that such a coincidence must rarely occur. During some ten years' rovings in the western suburbs of Bristol, I only met with one instance of tree wasps. In this case the nest was suspended from the branch of (I believe) a fir tree at about twelve feet from the ground. We threw stones at the nest and knocked it off. Every summer it was my custom to bring both Wasps' and Bees' nests from the fields and place them in suitable holes dug for them in the back garden. My pet insects were, however, apt to become so numerous and so obnoxious that, towards the close of summer, neighbourly expostulations and parental admonitions prompted me to destroy them. With regard to the nesting of birds, I used to expect on March 20 or 21 to find a Song-Thrush's nest with eggs in it; and on one of the dates named I made it my annual practice to start on birds'-nesting expeditions and generally succeeded in meeting with the Thrush's eggs. Sometimes, I also came across the eggs of the Robin, Blackbird, and Hedge-Sparrow on same dates.

Bristol, W. F. DUNNING, F.R.A.S.
June 20, 1907.

520. Wasps.—In answer to query No. 122, I have no doubt the Wasps were preying upon the caterpillars your correspondent noticed, as they feed freely upon insects as well as fruit. Perhaps Mr. Bedford may be interested in the following incident: I was sitting one day upon a garden seat, when my attention was attracted by a buzzing noise on the ground, and on looking down to discover the cause I found a wasp busily engaged in killing a large Bluebottle fly. He quickly despatched him and then proceeded to nip him in half at the junction of the thorax with the abdomen. He then flew away with the upper half, no doubt to his nest. I wondered whether he would return for the rest of his kill, and having moved it a few inches I sat still and waited. In about ten minutes back came Mr. Wasp, pitched on exactly the spot which had been occupied by his game, and seemed puzzled to find it gone. He searched about, however, and soon found and flew away with it.

Chichester. W. S. CLEATHER.

521. E. A. Bedford may be quite sure that the wasps, whose manœuvres he witnessed, were preying on the minute caterpillars. I have before now seen *Vespa vulgaris* vanquish and fly away with a large blue-bottle, and on another occasion visit a fishmonger's shop, where it quickly carved out and carried off a piece of salmon much larger than itself.

Chartley Vicarage, Stafford. H. G. C.

522. A Plucky Wasp.—On inspecting one of my nesting boxes at the beginning of May I found a Blue Tit lying dead upon her eggs. After clearing the box I replaced it in position. Ten days after this a second Blue Tits' nest was half built and a queen wasp was on the inside of the lid. Thinking her an undesirable intruder, I was on the point of taking her life, when I noticed that she, too, was making a nest, and was not the common wasp, being, probably (I have no book of reference by me), *Vespa sylvestris*. A week later the tits had completed their nest and the wasp was busy building an ash-coloured paper house, which hung by a single stalk from the lid inside the box and was about the size of an ordinary peach, with a small opening at the lower end, an inch and a half from the builders of the other nest. At last, not liking the look of things, and the increasing size of the building overhead, the tits quitted the scene without laying any eggs. The wasp is still at work and external layers of paper are being added to the structure. It seems rather unenterprising of the tits not to slay her outright, for tits are credited with taking bees, so why not wasps? Perseverance and pluck have won the day.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

523. Spider.—Strolling through a beautiful garden in this neighbourhood last week filled to overflowing with flowers and plants of every description, and many of them rare and foreign, I suddenly discovered on my coat a wonderful yellow insect. On looking more closely at it on the palm of my hand, I saw it was a spider. It was a pure chrome-yellow, body, legs and head, only the eyes were crimson. The body was very fat, and about as large as a full-sized dried pea, the legs rather short. It was a beautiful specimen, and quite rare I should say. Will some of your readers who are learned in spiders kindly give me their ideas on this note?

It is possible, I suppose, that eggs are in the foreign roots sometimes and do hatch in this country, and that this spider may have been a foreigner.

Haslemere. E. A. BEDFORD.

July 1, 1907.

[Was not the spider *Misumena vatia?* See NATURE NOTES for 1901, pp. 198, 218.—ED. *N.N.*]

524. What is a Perennial?—Having, by your kind permission, raised the botanical question as to what is a compound umbel, will you also allow me to ask when a plant should be called "perennial"? Ought not a plant, to be perennial, to come up year after year from identically the same root-stock, and not from a totally different part of an underground runner, or an overground one, which sends up fresh stems every year? If the plant is bulbous, ought it not, to be perennial, to come up year after year from identically the same bulb, as in the case of the white lily, and not from an adjoining bulb, or tuber, which has been shot out from last year's bulb or tuber, as in the case of the orchis? I find orchids described in botanical works as perennial, although they grow from a fresh tuber every year. It hardly seems reasonable that they should be placed in the same category as plants that grow from identically the same tuber or bulb year after year. By the bye, why will people keep calling an orchis "an orchid"? Does the designation "perennial" merely mean that the plant has some other way of propagating itself beside the propagation by means of seed? The term "biennial" applied to plants is a very misleading one, for every biennial is an annual or a perennial if allowed to sow itself in a natural way, that is, in the autumn. Every biennial will be an annual for the first year, if left to Nature. Every biennial throws out root-leaves in the summer or autumn, it makes no further progress that year, and then during next spring and summer it throws up the flower-stem and produces seed again, all within twelve months from the last seeding of the plant. If the bulbous root-stock of the common white lily is allowed to remain in the ground it throws out root-leaves in the autumn, and afterwards flowers in the following summer every year; but if the bulb is taken out of the ground when the flower-stem dies down in the early autumn before the root-leaves are produced and is not replanted until the spring, then the plant is delayed for one year and becomes biennial, for then it has to throw out its root-leaves first and to wait all the following winter before

it can produce the flower-stem. In the same way, if the seed of a so-called "biennial" is kept back all the winter and only sown in the next spring, the plant, in a like way, loses a year of its growth. There is, therefore, no such a thing as a biennial plant in Nature; it only becomes so by losing a year of its growth through artificial means. Would not "winter root-leafed plant" be a better name than "biennial"? It throws out root-leaves in the autumn, and afterwards it must wait all through the winter before it can throw up its flower-stem, which it does next spring, after remaining through the coming winter with root-leaves only. The blossoming and seeding of a plant is the determining era of its existence. If the flowers of an annual are cut off before it seeds, it will come up again and again, for the main design in the construction of a plant seems to be its own reproduction. If a plant dies down after blossoming and seeding, root-stock and all, and does not grow up again, it is an annual. If it dies down as far as the root-stock after blossoming and seeding, and afterwards grows again, it is a perennial. Some annuals, such as *Poa annua*, reproduce themselves many times in the course of a year. There is not a single plant that flowers and seeds twice over, that is, in two successive years, and then ceases to exist, as many people are led to suppose, by the term "biennial." Nor will any plant take two years before it can blossom and seed, unless its seed is kept back out of the ground during the winter by man, but it will always reproduce itself within twelve months, provided the soil is natural to it, and it is allowed to spring up in the autumn.

Hampstead, PETER HASTIE.
June 10, 1907.

525. Plant Freaks.—I note that the double white *Arabis* this year is throwing out flower after flower from the centre of the first flower to as many as four, coming on one after the other with bracts and some eight petals. It is seldom that more than two flowers show at the same time.

The Hen-and-Chicken daisy mentioned by Mr. O. C. Silverlock was common sixty years ago. J. ACUTT.

526. London Plants.—The *Daily Mail* has recently called attention to the remarkable series of plants now growing on the vacant sites in Aldwych and Kingsway. The list is as follows:—

Trifolium repens.	*Solanum nigrum.*
Senecio vulgaris.	*Ranunculus acris.*
Convolvulus arvensis.	*Silene Cucubalus.*
Sinapis arvensis.	*Pyrus Malus.*
Rumex acutus.	*Prunus domestica.*
Senecio Jacobæa.	*Phleum pratense.*
Stellaria media.	*Holcus mollis.*
Polygonum aviculare.	*Bromus sterilis.*
Tussilago Farfara.	*Dactylis glomerata.*
Carduus arvensis.	*Festuca elatior.*
Melilotus officinalis.	*Lolium perenne.*
Epilobium angustifolium.	*Avena fatua.*
Plantago major.	*A. sativa.*
Reseda lutea.	*Triticum vulgare.*

527. Unlovely Scenery.—I shall be very pleased if you will allow me, through the medium of NATURE NOTES, to reply to the note on "Unlovely Scenery," by Edmund Thos. Daubeny. Although not a Yorkshireman born and bred, I have lived in West Yorkshire long enough to have thoroughly sampled the delights of the western dales and rivers. I will candidly admit at the beginning that the three southern rivers, namely, the Don, Calder and Aire, are not by any means clean and appreciated during the summer months. But what can be expected from rivers which pass through a manufacturing district containing such towns as Leeds, Bradford and Sheffield. The Aire is, however, improving, owing largely to the restrictions placed on manufacturing firms to the west of Leeds, who used to empty all their waste liquors into the river. Although I cannot say from personal experience with regard to the dying off of the oak and

ash, which appeared to be common enough to me, I can say that swallows are to be seen about the River Aire for all its blackness. Passing on to the Rivers Whafre, Nidd, Ure and Swale, who has not heard of the beauties which these rivers and dales bring before the eyes of holiday makers and naturalists? After spending my summer holidays in one or other of these dales, I can say with confidence that any lover of the country will be well repaid for all the trouble he may be put to to get to these dales. To an ornithologist it is a veritable pleasure-house. By the rivers such birds as the Dipper, Kingfisher, and Grey Wagtail nest and breed, on the surrounding hills and moors the Snipe, Golden Plover, Curlew, and occasionally a Dunlin, are to be found. In one dale there is a last haunt of the Raven, that outlaw of the wilds.

120, *Belle Vue Road, Leeds,* S. HOLE.
June 12, 1907.

528. In the June issue of NATURE NOTES Mr. Daubeny has a note on the "unlovely scenery" of Lancashire and Yorkshire. It would be interesting to learn what part of either of the two counties is referred to. Even in East Lancashire, where most of the mills are erected, the swallow is not "absent," nor do the trees on the banks of "the poisoned waters" die "by inches." Most persons, I am afraid, obtaining their impressions of Lancashire from the railway-carriage window, imagine nothing but blighted, blackened country—an inferno of mill chimneys and sulphurous smoke. But away—and not very far away—from the railway track, it is possible to find "flies" living on the surface of the waters, and to cross a river without "holding" one's nose, yea, and even to find "living things" dwelling in the waters. Lancashire certainly cannot claim to be the most beautiful county in England, but, in spite of its manufactures, it is assuredly not quite such a hideous place as Mr. Daubeny's correspondent would make it.

Blackburn, P. P.
June 14, 1907.

NATURAL HISTORY QUERIES.

125. Bee Orchid.—I have just returned from a visit to a country house on the Hog's Back, between Guildford and Farnham. My host has a field in which large quantities of Bee Orchids have recently appeared. The plants are unusually vigorous, some of them having as many as eight blooms on a spike. My friend has lived in the house for sixteen years, and *Ophrys apifera* has only occurred very sparsely during that period, and not at all in that particular part of his grounds. Can you tell me whether the orchids have come from seed, or whether the tubers have been lying dormant all these years, and have only thrown up spikes in this exceptionally wet season? It seems unlikely that they could have "marched" from one part of the ground to another—a distance of some hundreds of yards.

Walton-on-the-Hill, M. J. TEESDALE.
July 12, 1907.

[I think it most probable that the Bee Orchids are seedlings. The species is self-fertilising and produces plenty of fertile seed. Its main difficulty seems to be with grass or other close-growing surrounding vegetation.—ED. *N.N.*]

126. A Stone with Curious Markings.—In this neighbourhood (Vale of Conway), there is an upright stone, now used as a gate-post, on which I notice a series of curious parallel slanting lines. They are about a quarter of an inch in depth, and seem much worn with age; they do not appear to me to be glacier scratchings, nor do I think them the result of plough scorings or cart wheel scrapings. I should be glad to send a drawing of the stone to any Selbornian who can throw light on the subject.

Ffynnon Bedr, Llanbedr, ANGELA BRAZIL.
Tal-y-Cafn, R.S.O., North Wales.

127. New (?) Orchid on the French Riviera.—Amongst the many wild plants which add beauty and interest to the flora of the Mediterranean littoral the orchidaceous ones are certainly not the least. I enclose a sketch of a white variety, which a botanical friend has named *Serapias cordigera alba*. I found it during May, about a mile from the sea in the bay of Cavalaire. Is it new or rare?

THOMAS POLE.

[Not new, but certainly rare.—ED., *N.N.*]

ASTRONOMICAL NOTES FOR AUGUST.

Mercury will be visible about an hour before sunrise, near the middle of the month. Very near Jupiter on the 11th.

Mars will continue brilliant in the Southern sky.

Jupiter will be a morning star, rising nearly three hours before the Sun at end of month.

Saturn will rise at 9.30 p.m. on the 1st, and at 7.30 p.m. on the 31st.

Shooting Stars will be very numerous between the 10th and 13th.

A Small Comet will be visible in the morning sky.

W. F. D.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members stand for election: *Central Society.*—Ernest J. Brown, Esq.; H. Cecil, Esq.; C. H. Crinling, Esq.; Miss A. Hick; Miss Mary A. Hollingsworth; the Rev. A. C. Holthouse.

Ealing Branch.—William Moore, Esq.

Subscriptions.—The Council has pleasure in acknowledging subscriptions of greater value than 5s. from the following members: Ernest Beck, Esq., £1 1s., and Robert Jones, Esq., M.D., £1 1s.

Library.—The Honorary Librarian has pleasure in announcing the following additions to the Library:—"Familiar Trees," 3 vols, by Professor G. S. Boulger, kindly presented by the Editor; White's "Natural History and Antiquities of Selborne." Bennett's edition, 1837, purchased by the Society.

The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of August 19 and September 16, for the purpose of issuing books to members.

NEWS FROM THE BRANCHES.

Birmingham Branch.—A Botanical excursion to Droitwich was arranged for Saturday, July 6. Only a small number of members met at New Street Station, owing to the uncertainty of the weather. It, however, cleared up, and a very fine afternoon was spent along the canal banks between Droitwich and Salwarpe. Mr. John Humphreys kindly acted as guide, and pointed out many interesting plants growing in the district. Tea was provided at Droitwich, and after climbing the hill to the old Church, the party returned to Birmingham.

EXCURSIONS.

Saturday, June 22.—On this afternoon thirty-five members left Slough in a motor *char-à-banc* provided by the Great Western Railway and drove to Stoke Poges. Here the churchyard in which Gray wrote his famous elegy was visited, and in the church a leper's window and a fireplace built of Roman bricks, which have recently been laid bare, were seen. The party then journeyed to East Burnham Park at the kind invitation of Mr. and Mrs. Harry J. Veitch, who most hospitably entertained the members and their friends to tea, and afterwards conducted them over the model dairy and the charming grounds which have been most rapidly brought to their present state of perfection. Some members took the opportunity of making a flying visit to Burnham Beeches before it was time to return to Slough.

Saturday, June 29.—West Drayton and Iver. This year the route of this always popular ramble was somewhat altered, and instead of the start being made alongside the G.W.R. bank, members and their friends, under the leadership of Mr. Wilfred Mark Webb, walked to the pretty village of Iver along the road. Iver Church, with its many objects of interest, was, as in previous years, much admired. The quaint and gruesome memorial in the chancel depicting the unfortunate lady who was nearly buried alive in 1631, the old stairs which formerly led into the rood-loft, the Norman font of Purbeck marble, and an old stone coffin, were pointed out by the verger. Several members of the party climbed the belfry tower, and were rewarded at the top by a magnificent view. On the way down, Mr. William Lawrence gave a very interesting demonstration on bell ringing. After leaving Iver village rain began to fall heavily, so that most of the beautiful walk through the meadows by the side of the River Colne had to be abandoned. No fishing for mollusca and very little hunting of any kind was possible, and everyone hurried to the Thorney Weir Fishery Club, where tea was provided. Although the weather was enough to damp the spirits (not to mention the clothes) of the most enthusiastic, it did not affect the geniality and energy of the guide; and the country, even seen through a downpour of rain, was very beautiful. Wild flowers were plentiful—yellow iris, forget-me-not and wild rose being particularly striking. Among land snails were found the amber snail (*Succinea elegans*) and *Helicigona arbustorum*, characterised by a single brown band.

Saturday, July 6.—Even a most welcome change in the weather did not tempt more than eight Selbornians to meet Mr. W. Percival Westell, F.L.S., M.B.O.U., at Watford Station. Those present, however, much enjoyed the visit to Cassiobury Gardens under the able guidance of the head gardener and by kind permission of Mrs. Peel. The gardens were looking delightfully fresh after the rains, and special mention must be made of a most handsome Tulip tree in full blossom. The magnificence of the Firs and Cedars at Cassiobury was freely commented upon by the Selbornians and much admired, whilst a Magnolia, some fine bulrushes growing round a fountain in the grounds, a sundial composed of box plants and some young frogs just finishing their tadpole stage, all attracted attention. The Garden Warbler and Spotted Flycatcher were both located, and a Cuckoo, mobbed by several Thrushes, swiftly careered across one of the lawns. After a hearty vote of thanks had been conveyed to Mrs. Peel and to Mr. Dean (the gardener) by Mr. Westell, the Selbornians made their way across Cassiobury Park, passing over the River Gade and the Bridgewater Canal and eventually reaching Whippendale Wood. Mention should be made of the dense masses of Dogwood and Elder Blossom, of the singing of the Chiff Chaff and the harsh scream of the Jays, and of the Balsam (*Impatiens parviflora*) which was found in great quantity on the Cassiobury estate. The Orange Balsam (*Impatiens fulva*) also grows within a short distance of its relative. Tea was taken at the keeper's cottage and the keeper's vermin pole was inspected. After tea a most enjoyable evening's walk was taken through a beech wood where the Bulbiferous Coral Root (*Dentaria bulbifera*) grows in profusion, along green lanes and across Cassiobury Park to Watford Station.

Saturday, July 13.—By kind permission of the Hon. Secretary of the Brent Valley Branch, thirty-eight members of the Society and their friends visited the Bird Sanctuary maintained by the Branch. Small parties were formed and these were taken round the wood by various members of the Branch. The shady paths and wealth of flowers were much admired and one or two late nests were seen. Tea took the shape of a picnic in a small clearing under the shade of a fine oak. The work of providing tea was also kindly undertaken by members of the Branch, the funds being provided beforehand by those who wished to attend. The thanks of members are especially due to Mrs. Wilfred Mark Webb, who not only granted permission for the visit but also made all the arrangements for the tea.

July 20.—Six members only met at Coulsdon Station for the walk over Farthing Downs. The weather was ideal, warm, tempered by a slight breeze. Chaldon Church, with its mural paintings, was visited, and tea was taken on Coulsdon Common. This walk is always full of botanical interest, and among other finds were *Lathyrus Nissolia*, *Reseda lutea*, *Ophrys apifera*, *Spiræa Filipendula*, *Malva moschata* and *Geranium pratense*. The length of the down grass this year was especially noticeable, probably owing to the long-drawn-out spring-like summer.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, August 19.—General Purposes Committee at 5.30 p.m.
Tuesday, September 24.—Council Meeting at 5.30 p.m.

Excursions

Saturday, August 3.—No excursion, on account of the August Bank Holiday.

Saturday, August 10.—Epping Forest. Take cheap return tickets to Loughton, 1s. Trains leave Liverpool Street at 2 p.m., and Fenchurch Street at 2 p.m. *Passengers from Fenchurch Street probably change at Stratford.* Meet at Loughton Station at 2.45 p.m, and walk *via* the "Camp" to Ambresbury Banks, where tea will be taken at Gregory's at 5 p.m. Return from Loughton, Chingford, or (by paying 4d. excess) from Theydon Bois. Total walking distance, 6 to 8 miles. Guide, Mr. C. Nicholson, B.E.N.A., who will give a short address on the "Camps."

Saturday, August 17.—Clandon and Newlands Corner. Take cheap return tickets to Clandon, 2s. 3d. Train leaves Waterloo (South Station) at 2.15 p.m., Clapham Junction at 2.27 p.m. Meet at Clandon Booking Office at 3.30 p.m. Tea at Newlands Corner. Return trains from Clandon at 8.28 and 9.27. p.m. Guide, Mr. A. B. Wilkinson.

Saturday, August 24.—Winchmore Hill Woods. Trains leave Broad Street at 2.17 and 2.40 p.m., Moorgate at 2.27, and Kings Cross (Met. Ry.) at 2.33 p.m. *Enquire if necessary to change at Finsbury Park.* Meet at Winchmore Hill Station at 3 p.m. Return fare, 1s. Guide, Mr. Oliver G. Pike.

Saturday, August 31.—Chorley Wood and Chalfont St. Giles (Milton's Cottage). Train leaves Baker Street (Met. Ry.) at 2.20 p.m. Return fare, 2s. 3d. Meet at Chorley Wood Station at 3.10 p.m. Walking distance about 6 miles. Guide, Mr. George Watts.

☞ *All communications with regard to Excursions should be addressed to* Mr. H. H. Poole, *Hon. Excursions Secretary*, at 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

Peter Hastie.—*Limnanthes Douglasii*, R. Br., a Californian species, commonly cultivated, belonging to a tribe, *Limnantheæ* of *Geraniaceæ* near to *Tropæoleæ*. The popular name "Buttered eggs" belongs rather to *Lotus corniculatus* or *Linaria vulgaris*.

C. E. Collins.—Double-flowered *Chelidonium* is fairly common.

W. B.—"Greater Maple" is a more correct name for *Acer Pseudo-platanus* than is "Sycamore," as the latter name belongs properly to an Oriental species of *Ficus*; but I believe "Greater Maple" to be merely a book-name. The Greek "phēgos" and Latin "fagus" are linguistically identical with the German "buche," Anglo-Saxon "boc," and our "beech," being connected with "phagein," to eat, with reference to the edible mast, and apparently giving rise to "book" from early engraving on beech-wood.

F. M. Potter and L. Copland.—*Phacelia tanacetifolia.* See answer to Peter Hastie in NATURE NOTES for June.

Miss Mary Tench.—*Rhamnus catharticus*, the Buckthorn.

Miss Mary H. Craft.—I very much doubt whether the fasciation of the Cockscomb (*Celosia*), or of *Sedum reflexum monstrosum* has been caused by mites.

---

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S. As Prof. Boulger will be out of England during August, all communications should be sent c/o the publishers, Messrs. John Bale, Sons and Danielsson, Ltd., 83-91, Great Titchfield Street, London, W., and it is requested that no perishable specimens be sent until the end of the month.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

The Selborne Society.

OBJECTS.

To promote the study of Natural History.

To preserve from needless destruction such wild animals and plants as are harmless, beautiful, or rare.

To discourage the wearing and use for ornament of: (1) the skins and furs of such animals as are in danger of being exterminated, and (2) the skins and plumage of such birds as are not domesticated.

To protect places and objects of natural beauty or antiquarian interest from ill-treatment or destruction.

To afford facilities for combined effort in promoting any of the above or kindred objects.

CONDITIONS OF MEMBERSHIP.

All persons who are willing to promote the objects of the Society may become members on election by the Council after nomination by two Members. The minimum subscription is five shillings, payable on election and on each succeeding first of January.

PRIVILEGES OF MEMBERS.

Members receive, post free, NATURE NOTES, the monthly magazine, are entitled to hold office, to attend the excursions, and to enjoy various other privileges afforded by the Society.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

CASES FOR BINDING

"NATURE NOTES"

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

PRICE 1s. 1d. NET, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd., 83-91, Gt. Titchfield St., London, W.,

They will be pleased to bind same in Cases on receipt of 1s. 3d. net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

In square crown 8vo, tastefully printed and bound, price 6s. net.

THE FLOWERS AND TREES OF PALESTINE

A Short Account of some of the Flora of that Country. By AUGUSTA A. TEMPLE.
Illustrated by 40 Photographs from nature, with an extended Glossary of Flower Names.

"The work is exceedingly well done, and is interesting from cover to cover. It is a welcome addition to existing literature on the subject, and the information upon the flowers and trees of Palestine is clearly and tersely set out and admirably arranged for reference, whilst the illustrations, of which there are forty, are exquisite."—*Worcester Herald.*

"As a Scripture history prize book in schools this book should have a large sale."—*Farm, Field, and Fireside.*

"Such a volume would be an invaluable boon to all future travellers in the Holy Land."—*Methodist Times.*

"The writer is to be congratulated on her great knowledge and the charming and entertaining methods in which it has been displayed in these pages."—*Bookman.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

The Athenæum says:—"This excellent and well-known periodical . . . The articles are all from the pens of authors eminent in their own lines."

PLAINLY WORDED.

KNOWLEDGE & ILLUSTRATED SCIENTIFIC NEWS.

EXACTLY DESCRIBED.

MONTHLY, SIXPENCE NET.

SUBSCRIPTIONS—Yearly 7/6, Half-yearly 4/-. Special for 5 Years, £1 5s.

(All Post Free to any part of the World.)

Contains **up-to-date** articles by the **ABLEST EXPONENTS** in the

VARIOUS BRANCHES OF NATURAL HISTORY & SCIENCE,

Profusely illustrated with full-page Plates, Photo Blocks, and Drawings.

Publishing Office:—27, CHANCERY LANE, LONDON.

OR THROUGH ANY BOOKSELLER.

No. 213. Vol. XVIII. September, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
BIRD NOTES IN NORMANDY AND CENTRAL FRANCE	161
THE SENSES OF ANTS AS REGARDS HEAT AND LIGHT	165
SELBORNIANA	169
REVIEWS AND EXCHANGES	171
NATURAL HISTORY NOTES.—Protection of Animal Life: Otters.—Seal in Morecambe Bay.—Victims of Lightning.—Fox and Badger.—Cuckoos.—Notes on the Cuckoo.—A Kestrel at Close Quarters.—A Garden Full of Birds.—Bird Protection *v.* Bird Destruction.—A Python's Meals.—Bee Stings.—Bud Destruction.—What is a Perennial?—Orchis or Orchids?—Orchids.—May Blossom	172
NATURAL HISTORY QUERIES.—Abnormal Carrot.—Abnormal Dandelion ...	177
ASTRONOMICAL NOTES FOR SEPTEMBER, 1907	178
SELBORNE SOCIETY NOTICES	178
ANSWERS TO CORRESPONDENTS	180

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

JUST PUBLISHED.

4to. Beautifully illustrated with 38 full-page Plates and a 5-figure 15-inch coloured Manikin and Key showing all the organs of the body.
Price **12/6** net.

By Eugen Sandow.

Construction and Re-Construction of the Human Body,

Being a descriptive account of his System of Cure by Physical Exercises, with an Introduction

By Dr. Sir A. Conan Doyle.

JOHN BALE, SONS & DANIELSSON, LTD., 83-91, Gt. Titchfield Street, W.
And at all Booksellers and Libraries.

The Athenæum says:—"This excellent and well-known periodical . . . The articles are all from the pens of authors eminent in their own lines."

PLAINLY WORDED.

KNOWLEDGE & ILLUSTRATED SCIENTIFIC NEWS.

EXACTLY DESCRIBED.

MONTHLY, SIXPENCE NET.

SUBSCRIPTIONS—Yearly 7/6, Half-yearly 4/-. Special for 5 Years, £1 5s.
(All Post Free to any part of the World.)

Contains **up-to-date** articles by the **ABLEST EXPONENTS** in the
VARIOUS BRANCHES OF NATURAL HISTORY & SCIENCE,
Profusely illustrated with full-page Plates, Photo Blocks, and Drawings.

Publishing Office:—27, CHANCERY LANE, LONDON.
OR THROUGH ANY BOOKSELLER.

ALL RIGHTS RESERVED.

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 213. SEPTEMBER, 1907. Vol. XVIII.

BIRD NOTES IN NORMANDY AND CENTRAL FRANCE.

HAVING for some years past been accustomed, before starting for a holiday, to search for information as to localities the back volumes of natural history magazines, especially Nature Notes, it occurs to me that a few jottings about the birds of Normandy may be helpful to those readers who pursue the same plan. Looked at in this way, the following observations may not be considered entirely as a dry catalogue. They were made during a month's cycling tour, taken from July 24 to August 22, 1903. As a general conclusion, I consider that the complaint as to the destruction of birds in France, so far as concerns the five departments visited, must not be pressed too seriously. Certainly the house-sparrow was not over plentiful, except perhaps in the Department of Calvados. It would scarcely be an exaggeration to say that chaffinches were almost as well represented as their hotly persecuted comrades. Blackbirds and thrushes were particularly scarce for such common birds: strangely enough, the missel-thrush, both by noise and in person, was as much in evidence as its more musical congener. The chiff-chaff, willow-wren, wood-wren, and whitethroat were by no means abundant, but allowance must be made for the fact that the three last had ceased to sing, and all four might easily be overlooked in the moulting season, more especially by those a-wheel. On July 30, however, I heard the grasshopper warbler in the Forest of Brotonne. By the British earthwork at Puy, near Dieppe, on July 25, at 5.30 in the morning, I heard the following birds singing: yellow-hammer, blackbird, blackcap, stonechat, whinchat and willow-wren. The blackcap and whinchat I heard no more, but the stonechat was everywhere. Yellow-hammers could be seen by the half-dozen in almost any district, and an occasional corn-bunting perched on the hedgerow.

Starlings were strikingly few in number. The chimney-swallow was everywhere abundant, the house-martin not so common as at home, yet one curious instance may be noted. On the façade of the Protestant Church at Lillebonne are twenty-five ornamental corbels, of slight projection, arranged pediment-wise. In the hollow between each pair of corbels was a house-martin's nest; each recess had its own nest, save that in two cases two structures had been jammed into one nook. Sand-martins were not so numerous as might have been expected. There was a fair-sized colony by the roadside at Le Trait, not far from Caudebec. Good exposures of sand occur in cuttings or lanes south of Fécamp, at Duclair, at Toulbec, near Pont Audemer, in each case not far from water, so that the conditions were favourable. The Hirundines were well represented near the mouth of the Seine, though the return migration had not set in. Swallows suggest swifts, scientific classification notwithstanding. These latter birds, so abundant in England this year, even in the London suburbs—I believe to a phenomenal extent—were not much seen on the tour; St. Lo and Caen seemed the best spots. Nowhere did I see a rookery, nor did the rook appear plentiful. There were two large flocks on the alluvial flats of the Seine, between Harfleur and Tancarville, and another was noted at Jort, near Falaise. This last company was busy among the cut, sodden wheat. Useless it is for the indiscreet humanitarian to deny such facts, nor would he do so had he ever seen the crop of one of these birds opened after such occasional depredations. The better argument to adopt is the eleven months' good service as against one or two months' casual thefts, and the cheapness of boy-labour, in holiday times, for scaring purposes. Incidentally, I may say that I saw no dead birds used as scarecrows, with a possible exception in a composite scarecrow near Lillebonne, nor were there any gibbets of jays and magpies. Of the magpies there is no need to speak, one sees a score in Normandy or Brittany for every single bird counted in England. Only one or two jays were seen. Jackdaws were multitudinous—on the house-roofs at Goderville and Domfront, in the church towers at Caen and Bayeux, on the chalk cliffs at Tancarville and Neules. Crows were quite as numerous as in England, and not nearly so shy. One saucy pair near Cany, feeding in the middle of the road, rose just in time to escape my front wheel, skulked behind a tree for a moment, as if for the sake of custom, and then rushed back to to their dainty morsel.

The wryneck kept his voice well employed. Once or twice an owl was heard. There was a good supply of green woodpeckers; I startled one of these in a shallow ditch—an unusual situation—near Bournville. He was not more than two yards away, and consequently made a tremendous fuss. Very few pipits were observed; not a single lapwing was to be seen, nor one of the hawk tribe, except a sparrow-hawk, stuffed, in the hotel at Pont

Audemer. Pied wagtails were abundant, especially by the Tancarville and Havre Canal. Some of the grey species and a fair number of the white (*Motacilla alba*) were seen, but not one yellow wagtail. Tits were strangely scarce, the blue and long-tailed kinds being apparently the chief representatives.

Very pleasing it was to note, over and over again, a few goldfinches. The district around Jumièges was noticeably rich, and these birds are great favourites there for the cage. The turtle-dove, too, is often seen in the cages outside the cottages. Redstarts might be said to be moderately plentiful, and a good number of red-backed shrikes are recorded. One day, at Yainville, near Jumièges, I observed a shrike with food in its mouth, and seeing that it was a little suspicious, jumped off the bicycle. The subsequent distress of the creature settled my doubts, and careful search on an adjacent hawthorn revealed the little butcher's larder, several humble-bees of two species, and the hinder part of a large beetle, all neatly skewered on the thorns.

Of the flowers of Normandy little need be said; they are more readily seen than birds and more easily examined, if the cyclist does not mind dismounting now and then. He will find vast stretches of melilot, yellow and white, vervain in surprising profusion, clumps of soapwort, and long banks of mulleins (*V. Thapsus* and *V. nigrum*), and rank masses of fennel and hemlock. The huge plane tree near Bayeux Cathedral will not be overlooked, nor the nineteen specimens of the "Tree of the gods" (*Ailanthus*) in front of the Lycée Corneille at Rouen. The Gingko tree in the Castle grounds at Domfront might easily be missed, but catalpas meet the eye continually.

Birds of Central France and the Auvergne.

Perhaps a supplement to the above notes may not be unwelcome. The following observations cover a month's cycling and walking tour, taken in August, 1905. The departments visited were Seine-et-Marne, Seine-et-Oise, Loiret, Loire-et-Cher, Cher, Allier, Puy de Dome, and Cantal.

Journeying southwards from Fontainebleau, by Montargis and Cosne to Nevers, one noticed, scattered amidst fertile fields, pastures burnt and bare beyond belief. For scores of miles the star-thistle (*Centaurea Calcitrapa*) abounded, and one field seemed given over to the alien thorn-apple (*Datura Stramonium*); yet the bird-life was not poor—greenfinches, flycatchers, and stonechats were common, and, of course, magpies. Attached to the archway of the stable-yard of the inn at Villeneuve (Allier) was a huge patchwork, composed of house-martins' nests. At Riom it was pleasant to hear the song of the blackcap, a bird not much in evidence in France.

As I travelled still southwards into the volcanic district of the Auvergne, birds became scarcer. Some goldfinches appeared by the shores of Lac D'Aydat, which is held up by a dam

formed by an outflow of lava. But in the uncultivated country between that lake and Le Mont Dore one traverses mile upon mile of almost uninhabited, desolate volcanic highlands. A few pipits could be seen, a crow or two, and occasionally a brown-coloured member of the order *Accipitres*, which I took to be probably the common buzzard (*Buteo vulgaris*). Generally, in the grand solitudes of the Auvergne the avifauna, as might have been expected, was scanty.

At a small wayside inn at Le Vauriat, near Clermont-Ferrand, where I sheltered three or four hours from the rain, two Frenchmen, of the middle class, came in, laden with fungi, chiefly the "parasol" (*Lepiota procera*) and a species of *Marasmius*. The last-named kind they ate raw at luncheon. After the rain, starlings, sparrows and greenfinches were as noisy as their relatives in England under like circumstances.

By this time I was going northwards again. In the Department of Cher there are large farms, reminding one of England. One such farm, the occupier said, comprised 70 hectares, say, 170 to 180 acres. The fields were very different in size from what one sees in Brittany and Normandy, and the farming seemed a little rough in character. The windmills and brickyards seemed home-like, and I noticed an English winnowing-machine and a Rochester steam-engine. Here, too, was another English feature, fortunately the only one met with of its kind, a kestrel nailed to a wall! For some kilometres there followed continuous pastures. In this district wheatears, stonechats, whinchats, and red-backed shrikes were abundant. A flock of eleven magpies crossed the road on one occasion. Crows and woodpeckers were not rare. But the goldfinches predominated. During a single day, entered in my note-book as "Goldfinch Day," I counted seven flocks, varying in number from four to over a score. An odd tree-sparrow or two, and a few willow-wrens—very scarce birds, apparently—were also seen that day.

At Bourges Cathedral—why was it not Rheims?—there was a colony of jackdaws. From 200 to 300 swallows had collected on the telegraph wires at La Motte Beuvron (Loire-et-Cher). In this department, now betraying patches of golden stubble over vast lengths—a land of fat turkeys and geese—I saw a party of sixteen magpies and a "desert" of about twenty lapwings. In Loiret I crossed a flat, treeless, wind-swept plain. There hovered the kestrel, and once the great grey shrike appeared. There were many crows, and several times I saw what appears to have been the lesser kestrel (*Cerchneis naumanni*), but of this I am not sure. In fact, several birds, rendered doubly doubtful by their unfamiliarity and their transitory exposure to view, are left unrecorded. In Seine-et-Oise the soil seemed unkindly, all was dried up, there were few flowers, and the star-thistle reigned supreme. Between Arpagon and Paris rooks circled overhead in the park lands, a welcome sight.

To sum up, the impression left on my mind is that France is

poorer than England in species, but that the numbers of individuals are greater than common repute will allow. That country, like our own, suffers from the shooting mania—a friend of mine staying in Indre at the same time that I skirted the department, saw a golden oriole shot. Probably the bird-catcher is a greater sinner still. Our only hope, here and abroad, is with the young. Till the lads learn to look upon destruction of nests and eggs as a mean act, there will be little accomplished. The common which I know best, close to London, loses, I should estimate, three-fourths of its nests by wanton destruction. On Whit Monday of this year broken birds' eggs could be seen floating in the ornamental waters. Bird-protection, like charity, begins at home.

WALTER JOHNSON.

THE SENSES OF ANTS AS REGARDS HEAT AND LIGHT.

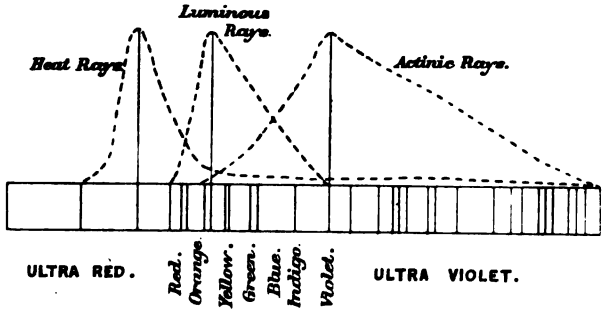
THE following experiments conducted during the last two years will, I think, throw some light on the subject of ants' feelings towards heat and light. It has been clearly proved by Lord Avebury and others that ants possess a sense of colour, that they can distinguish all the colours we see, and that they have a peculiar aversion to the ultra-violet rays of the spectrum. Moreover, it has been shown that their dislike of the rays of the spectrum increases from the ultra-red to the ultra-violet. The questions now to be answered are, how do the ultra-violet and the ultra-red rays affect the ants?

(1) Do they appear to the ants as true light rays? Are they, as far as the ants are concerned, distinct colours, colours which may be as different from those we know as red is from blue?

(2) Are the ants affected by them chemically? This suggestion is supported by the fact that the chemical rays increase in number from the ultra-red, where there are practically none, to the ultra-violet, where they are comparatively numerous. Also the formic acid which is secreted by most ants, being an unstable compound, might possibly be decomposed by the chemical rays transmitted through the violet end of the spectrum.

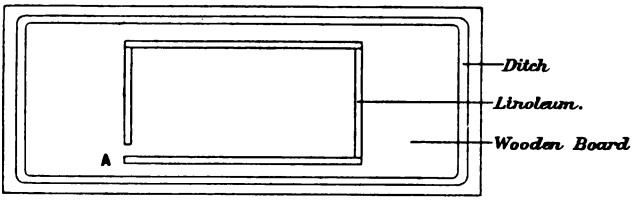
(3) Are the ants susceptible to the slight range of temperature between the different portions of the spectrum? An examination of the accompanying diagram shows that the maximum amount of heat is transmitted in the ultra-red, and that here no luminous rays or chemical rays are transmitted. Secondly, the luminous rays are seen to be at their maximum intensity between the orange and yellow, where few heat rays and practically no chemical rays are transmitted. But the chemical rays, it is noticed, are at their maximum in the ultra-violet, where there are no luminous rays and extremely few heat rays.

Suppose an ant to be placed in the ultra-violet portion of a large spectrum—it moves away immediately. Does it move because it objects to the chemical rays which are transmitted so freely there, or because it objects to the colour of the ultra-violet rays, or because it is susceptible to the slight decrease in tempera-



ture in this portion of the spectrum? It is probable that it is due to all these causes, yet, as far as I know, no experiments have been performed to show that ants are susceptible to very slight changes of temperature, such as would be experienced in the different portions of the spectrum. In order to prove this susceptibility I performed the following experiments, which I have repeated at intervals with always the same result.

The nests I used were constructed as follows: A sheet of glass 10 ins. × 8 ins. formed the bottom of the nest. The top



consisted of a similar but very thin piece of glass supported by strips of linoleum $\frac{1}{4}$ in. wide and $\frac{1}{8}$ in. thick. These strips were glued to the lower sheet of glass, thus leaving the upper piece free to be removed at will. A small opening was left at A, and the nest was placed on a board 2 ft. × 1 ft. 3 ins. with a small ditch of water round it. The space between the two pieces of glass was partly filled with fine earth, which the ants arranged after their own fashion.

The following are the various experiments I performed with the time between them:—

(1) September 21, 1904, a preliminary experiment. At 10.30 a.m. I placed a glass cell 60 mm. square by 10 mm. deep on a

nest of *Lasius niger*, the common garden ant, making sure that there were no ants under it. At 11. a.m. there were still none under. At 11.30 a.m. there was one under, but he was moving about, and so was probably under by accident. On repeating this several times with the ditch full of water at the temperature of the air, I found that the results were always the same, viz., none went under.

(2) October 1, 1904, at 12.30 p.m., I warmed the water in the cell by adding three or four drops of sulphuric acid, and then placed the cell on the nest as before, making sure there were no ants under; the water being now at a temperature of 20° C., and the temperature of the air being 13·4° C.; there was thus a difference of temperature of 6·6° C. At 1·55 p.m. there were about 250 ants under, together with all the pupæ, larvæ and eggs. The pupæ, it may be well to remark were always carried under first, secondly the eggs, and finally the larvæ.

(3) October 2, 1904, 2.45 p.m., repeated. Temperature of air 13·7° C.; temperature of water 15·3° C.; therefore difference of temperature 1·6° C. At 2.50 p.m. there was one pupa, one larva, one female, and two workers under. At 3.15 p.m. these all went out again. The temperature of the water at this time was 14·1° C., *i.e.*, only ·4° higher than the temperature of the surrounding air.

(4) At 3.35 p.m. repeated. Temperature of the air 13·8° C.; temperature of the water 17·05° C.; therefore difference of temperature 3·25° C. At 3.50 p.m. there were about seventy ants under, sixteen pupæ, seven or eight larvæ, and half the eggs. At 4·20 p.m. there were about 250 ants under, all the pupæ, half the larvæ and half the eggs, the temperature at this time being 14·4° C., *i.e.*, a difference of ·6° C. At 4.30 p.m. they were nearly all out again, except a few workers and larvæ; the temperature now being 14·2° C., *i.e.*, a difference of ·4° C. [It will be noticed from the last two experiments that the ants go out from under the cell when the difference in temperature between the water and the air is less than ·4° C., less by reason of the loss of heat, owing to its absorption by the glass on the bottom of the cell and by the fine glass cover of the nest. But when the difference is ·6° C. the ants continue to gather under it, and only depart when the temperature has lowered itself ·2° C. more.] These two experiments, repeated between twenty and thirty times, are, to my mind, sufficiently convincing proof that ants are susceptible to a change of temperature of at most ·2° C.

(5) At 4.30 p.m. I placed the same water (temperature 14·2° C.) 1½ ins. to the right, where there were about seventeen ants under it. At 4.45 p.m. there were twenty-two ants under; at 4·47 p.m. two pupæ were carried under. The difference in temperature now was at the most ·4° C., and was probably not more that ·35° C., owing to the reasons stated above. At 5·45 p.m. there were none under, the temperature of the water being the same as that of the air.

These experiments show that ants notice a rise of temperature of ·4° C., at the most; for if ants did not go under for the sake of the extra heat, they must have gone under (1) for shade, (2) by accident, or (3) by instinct.

(i.) (*a*) If they went under for shade, then they would remain under and not come out.

(*b*) Also they would have gone under in the first experiment, when the water in the cell was at the temperature of the air; but they did not do this.

(ii.) One reason (*a*) of the above fact that they went under and came out again seems at first sight to support the argument that they went under by accident, but to any one who has actually watched the experiments the possibility is quite contrary to reason.

(iii.) This argument assumes that they noticed the difference of 6·6° C. experienced in the first experiment, and that they went under in the following experiments because they knew that the portion under the cell, which presumably they saw, was hotter than the surrounding portions. This argument, then, says that it is not conclusively proved that ants feel a difference of temperature of ·4° C. or less, but that they do feel a difference of ·66° C., the difference of temperature experienced in the first experiment.

In order to test this I placed the whole nest inside a dark cupboard in a dark cellar so that no light was admitted even when the door of the cupboard was opened.

(6) At 6.10 p.m.: In the same way as before I filled the cell with water and warmed it by adding strong sulphuric acid drop by drop until it was exactly 14·7° C., *i.e.*, exactly 1° C. above the temperature of the surrounding air. Then taking the cell, and switching off the small 4-volt lamp—which I used to read the temperature with—I placed it on a part of the nest where I knew there were no ants. At 6.23 p.m. there were six ants under. At 6.28 p.m. all these went out again.

(7) Repeated: At 6.30 p.m., temperature of air 13·7° C.; temperature of water 16·0° C.; therefore difference of temperature 2·3° C. I placed the cell on the nest as before, but there were five or six ants under. At 7.30 p.m, there were half the pupæ, and about seventy ants under. The temperature of the water at 7.30 p.m. was 13·9° C., *i.e.*, only ·2° C. above the temperature of the air. In all probability there were more under at about 7 o'clock, but unfortunately I was unable to look at that time.

(8) Repeated: At 7.37 p.m., temperature of air 13·7° C.; temperature of water 15·9° C.; difference of temperature 2·2° C. I placed the cell quite 4 ins. away from the nearest ant. At 8.10 p.m. there was one worker under. Evidently this absence of ants was due to their not feeling the heat at such a great distance.

(9) Repeated: At 8.15 p.m., temperature of air 13·7° C.; temperature of water 16·7° C.; therefore difference of temperature 3° C. This time I placed the cell between two piles of pupæ,

larvæ, and eggs. At 8.30 three-quarters of the pupæ were under and about 200 ants. At 9 p.m. all the pupæ were under and all (250) the ants. At 10.15 p.m. there were two ants under only.

On repeating these experiments many times I found that the results were nearly always identical under the same conditions. These last few experiments conducted in a dark cupboard clearly prove that the ants do feel a difference of temperature each time the warm cell is placed on the nest and do not go under from instinct.

That ants (some at any rate) feel a rise in temperature of not more than ·3° C., may easily be proved by any one possessing an accurate thermometer.

In my own experiments I never found that more than ten ants went under for a rise of less than ·4° C., but that for a rise of ·5° up to 1° C. never less than ten did so.

As regards the effect of the ultra-violet rays, it has already been proved by Lord Avebury that they must affect the ants as true light rays. This being so, in all probability these ultra-violet rays appear to the ants as a colour of which the human mind can form no idea. I think we are now justified in saying that the ants are not affected by these rays chemically, but that they change their positions when placed in the light of the spectrum by reason of their dislike to the colour of the ultra-violet rays, and also by the reason of the smaller amount of heat transmitted through this end of the spectrum.

From the foregoing experiments which I have taken as being the average of more than sixty observations, I think we may draw the following general conclusions:—

(1) That ants feel changes of temperature.

(2) That they feel very small changes of temperature.

(3) That their sensations of heat must be much more delicate than our own.

OSCAR C. SILVERLOCK.

SELBORNIANA.

LORD STAMFORD'S ACCIDENT.—The *Sheffield Daily Telegraph* writes as follows anent the recent accident to our esteemed Vice-President. As Gilbert White was—as most people know—a bachelor, Lord Stamford is not, of course, a "lineal" descendant.

"The Earl of Stamford, who has just narrowly escaped being drowned while feeding some swans in the grounds of Dunham Massey Hall, ought least of all men to have suffered as the result of his kindness to the dumb creation, seeing that he is a lineal descendant of Gilbert White, the fine old naturalist of Selborne. How this comes about his Lordship once took the trouble to explain to a meeting of the Selborne Society. His Lordship's son and heir, little Lord Grey of Groby, who will be 11 years old in a few weeks, takes his title from the distinguished military commander, who was the cousin of Lady Jane Grey. Another Lord Grey was one of King Charles's judges, and was among the signatories to the Monarch's death warrant, while his father, the first Earl of Stamford, commanded for the Parliament in the west country."

BIRD PROTECTION ORDERS.—We have received from the Home Office an Order, dated November 17, 1906, referring to Northumberland, repealing that of January 1, 1902, extending the close time, prohibiting the taking of any eggs on Holy Island for five years, or the eggs of the chief sea-birds on the Farne Islands, or those of owls, hawks, kingfisher, gold-crest, snipe, woodcock, or golden plover in any part of the county.

We have also received an Order, dated August 9, referring to Northamptonshire, repealing that of January 15, 1896, extending the close time for the heron from the last day of February to September 2, adding owls, hawks, heron, kingfisher, nuthatch and wryneck to the Schedule, protecting all owls and the kingfisher throughout the year, and prohibiting the taking of their eggs or those of the goldfinch, woodpeckers, or sandpiper.

BIRD PROTECTION IN HUNGARY.—"The cause of bird protection is being energetically advocated in Hungary. An instance of this is to be noted in an official publication issued by the Department of Agriculture in Budapest, giving in a concise form the history of the International Convention for the Protection of Birds, and also a description of the present state of international protection of birds useful to agriculture. It is noteworthy that the volume in question is written in English, in order, it is stated, to make the facts accessible to the knowledge of as many persons as possible, and also 'to serve the cause of progress.' The Hungarian Minister for Agriculture gives an interesting account of what has been done as regards international measures for the protection of birds useful to agriculture, and points out that much still remains to do before a perfectly satisfactory state of things can be attained on an international basis. Some countries still hold aloof from the Convention, among these being Italy, which is the one country where bird protection may be expected to bring about the most satisfactory results."—*Scotsman.*

CONVICTION FOR TAKING SKUAS' EGGS.—At Lerwick Sheriff's Court, on July 15, Major Sterling, of Dingwall, and A. L. Jessop, of Leasingham, near Sleaford, were charged with having on June 3, being a date within the time specified in the order after mentioned at a part of the island of Hascosay, at the East Banks, being a place within the area specified in the order, taken two eggs of the great skua, a species of wild bird specified in the said order, and at a part of the said island did take four eggs of Richardson's skua, a species of wild bird named in the said order, contrary to the Wild Birds Protection County of Zetland Order, 1905. Accused failed to appear and proof was led in absence. Sheriff Brown imposed a fine of £1 for each egg taken, and also declared each egg forfeited, three to be sent to the Edinburgh Museum, and three to be sent to Christ's Hospital, London.—*The Field.*

PROTECTIVE MEASURES IN OTHER LANDS.—Passing through one of the poorer districts of New York, a few months ago, I saw some young trees planted along the kerb in front of a Public Elementary School. The guard round each tree was inscribed, "This tree is a gift to all children. Be kind to it." Visiting, a few days ago, the wonderful collection of megalithic remains which have rendered the heath of Carnac famous throughout the world of archæology, I saw that near each cromlech, or group of stones, was a simple granite column with an incised and painted inscription, stating the name of the megalith and that it was the property of the State, and that any damage to it was punishable by law. These seem to me excellent examples, though the unfortunately permissive character of our Ancient Monuments Act gives us but few opportunities of following the second of them.—ED. *N.N.*

MANCHESTER MICROSCOPICAL SOCIETY'S LECTURES.—We have been asked to call attention once more to the long and varied list of lectures on Natural History, which some fourteen members of this Society are prepared to deliver in Yorkshire and the Manchester district before societies who are unable to pay large fees to professional lecturers. The list can be obtained from the Hon. Secretary, Mr. F. B. Cocker, 22, Filey Road, Fallowfield, Manchester.

REVIEWS AND EXCHANGES.

Familiar Trees. By Professor G. S. Boulger. With Coloured Plates by Messrs. Boot and Muckley, and Plain Plates from photographs and photomicrographs. 3 vols. $7\frac{3}{4}$ ins. × $5\frac{1}{4}$ ins.; pp. 160, 152 and 192. Cassell and Co. Price 18s.

Professor Boulger's "Familiar Trees," so *familiar* to lovers of Nature, has developed into *three* volumes of the same size. The artistic "get up" is a decided improvement. The original edition had only forty trees, we have now nearly half as many again, and a large addition of illustrations, together with a useful synopsis of the botanical characters, and an index. The descriptions of the new trees are on the same interesting lines as the old ones, being full of information. We do not see how possibly they could be improved.

We are glad to see the author introduces ecological observations from time to time, as this is the aspect from which botany must be studied for the future. Noticing such under the Strawberry-tree (*Arbutus Unedo*), we observe he has shifted the accent to the *u*. Hooker regards the word as *Unĕdo;* but we presume the author has followed the suggested etymology from *unus edo, i.e.*, to eat one berry would be enough!

We should have liked to have heard Professor Boulger's ecological interpretations of the differences in the distribution and size of the vessels of the wood. He describes them as of three sorts: "non-porous," wood (*conifers*), "ring-porous," as of Oak, Chestnut, &c., in which the greatest development is in the first wood formed in early summer, and "diffuse-porous," the vessels being more or less equally distributed through the whole season's growth. Botanists have not yet made a comparative study of these differences, for the nature of the locality where a tree was first evolved ought to be known. But, taking a tree known to be intensely xerophytic, as the Tamarisk (Pl. I., p. 151), which grows in North Africa, where it gets but a small amount of water in spring, we seem to see the connection in a small zone of spring vessels. Again, Box and Holly

are naturally xerophytes of hilly districts. These have diffused and very small vessels, but nothing special in the first wood. On the other hand, water-loving trees, as Willows, Poplars and Alder, have diffuse-porous wood with much larger vessels. This is but a very rough index of some coincidences; but numerous exceptions and anomalies will be found, so that there is a large field for observations, and a good subject for some aspiring ecologist to attack. It must not be forgotten that the anatomy of the roots must be studied simultaneously with the stems.

All who wish to know all about familiar trees must not fail to get these three excellent volumes, and study their living prototypes simultaneously.

G. HENSLOW.

RECEIVED.—*Bulletin of the New York Botanical Garden*, vol. 5, No. 17; *The American Botanist* for June; *The Victorian Naturalist* and *Progress* for July; and *British Birds*, *The Naturalist*, *The Irish Naturalist*, *The Animals' Friend*, *The Humanitarian*, and *The Agricultural Economist* for August.

Some other reviews are unavoidably held over.

NATURAL HISTORY NOTES.

529. Protection of Animal Life: Otters.—Last week a very large dog otter appeared in the Cavendish Dock at Barrow, the great seaport in the north-west of "dirty, unenviable Lancashire." It was, unfortunately, stoned to death. The Furness Railway Company *at once prosecuted (!)*, saying that any animal or bird which became their property must not be molested. Since they would not prosecute for the death of the animal, they brought the action on the ground of the throwing of stones into the Dock being illegal. Dismissed with costs. It is very pleasing to hear of the Railway Company protecting wild life in this way. Otters are abundant in some parts of the county; for let me remind those who scorn the beauty of the county that, although part is undoubtedly very smoky, the northern half contains scenery which is equal to any in the Kingdom, a large part of the far-famed Lake District lying within its limits. Barrow is a large town (75,000) with many smoking chimneys, yet within a mile lies the "Vale of Deadly Nightshade" and Furness Abbey, one of the fairest vales in all England.

Grange-over-Sands. R. C. LOWTHER.

530. Seal in Morecambe Bay.—Last week a seal of large size was noticed at Humphrey Head after the tide went out. They are rather rare visitors to the Bay. Some accounts say that this one was captured by fishermen living near, in which case it might realise £15 alive, or £8 dead. Other accounts say that it escaped to the open sea. Seals are more frequently seen in winter time, especially if there is much ice in the Bay.

August 3. R. C. LOWTHER.

531. Victims of Lightning.—During the recent terrific thunderstorm which passed over Lancashire four seagulls at Carnforth on Morecambe Bay were struck and killed by lightning, the body of one being much burnt.

Grange-over-Sands, Lancashire, R. C. LOWTHER.
August 1.

532. Fox and Badger.—W. R. J.'s case in No. 490 against badgers is not a convincing one. It seems that a vixen was found dead and mangled near the home of a badger, and also that her cubs were found mangled in the middle of a field. The cause of their deaths he supposed to be revenge for the vixen having taken possession of the badger's burrow. When a fox enters the burrow of a badger, the smell is so intolerable to the rightful owner that it throws up house and home out of pure disgust, and even if the fox were to leave, the badger would not re-enter it. The probability is that a dog killed the cubs in a field, and in trying to defend them the vixen was so mauled that she crawled away into the wood to die near the badger's home. If badgers were more common we should not hear such constant complaints of a plague

of wasps. They are much given to digging up the nests for the sake of the wasp grubs of which they are very fond.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

533. Cuckoos.—Three eggs have been laid by cuckoos in the same wagtail's nest in this village. One of the birds was thrown out by the others and died. Of the two that remained, one was seen in the garden before it could fly, and being fed by its foster parents survived ejection from the nest. The third occupied the nest for some time, and was found dead shortly after becoming full fledged. I heard the cuckoo and even its gurgling note on July 15, showing that the old birds remained late this year, a record as far as the observation of their cry is concerned. The young birds of the year stay several weeks longer than their parents; a reversal of the ordinary rule of migration.

EDMUND THOS. DAUBENY.

534. Notes on the Cuckoo.—In supporting the writers of Nos. 504 and 512 in their statements that the cuckoo often calls while on the wing, I should like to suggest that the idea that the bird "in June changes his tune" is merely a concession to the convenience of the rhyme, since I have often heard him say *cuc-cuc-koo* in May, and think it is simply the result of excitement caused by his seeing another bird or getting impatient at *not* seeing a prospective mate. The latter state of mind is also provocative, I think, of the sound described as a harsh, rasping "caw," by Mr. Blakiston (p. 151)—a sort of rough hiss, I should call it—and very suggestive of bad language. Being once out with a friend, who was very expert at imitating the cuckoo's note and called up a bird we heard some distance off, we sat down under a tree and watched the bird. It answered my friend most eagerly and kept flying round us at some little distance, from tree to tree, making the "swearing" noise almost every time it took wing, and seemingly getting very exasperated at not being able to find the supposed other cuckoo. At last it caught sight of us and departed. I do not know the gurgling sound, but possibly this is made by the female. In reference to the cuckoo's classical name referred to by A. L. H. (p. 137), is it a fact that *cŭcūlus* means a cuckoo? In an old Latin dictionary of mine there is no reference to the cuckoo at all under this word, so it can hardly have been intended to express the bird's cry. It is unfortunate, too, that the English name does not express the cry either; it should be *cookoo*, with the first *oo* short and the second long, to be exact. The Italian *cuccu* and Welsh *cwcw* are much nearer. It seems to me that, if *cuculus* had been intended to express the bird's cry, the *lus* is superfluous. Personally, I think the word originally existed in Latin with another meaning and was afterwards applied to the cuckoo as appropriate in several ways without modification.

Hale End, Chingford. C. NICHOLSON.

535. A Kestrel at Close Quarters.—The occurrences described under this heading on pp. 117 and 152 are by no means exceptional, I believe, assuming the hero (or victim) in the first was a sparrow-hawk, and not a kestrel, as is most probable, kestrels being rather birds of the fields, while sparrow-hawks hunt more in woods and amongst bushes. In both cases, no doubt, the bird of prey was pursuing its intended victim and was either unable to stop itself in time to prevent its collision with the window, or was ignorant of the existence and nature of the glass in the latter. The very fact of its *pursuing* its prey also confirms the supposition that it was a sparrow-hawk, since kestrels do not indulge in the chase, but descend with stonelike velocity on their victims from a great height.

Hale End, Chingford. C. NICHOLSON.

536. A Garden Full of Birds.—Mr. Daubeny's garden is indeed unique as a nesting place. I cannot claim to rival it, but can note the following bird homes also within thirty yards of our windows:—

Blue Tit	House-Sparrow	Spotted Flycatcher	Missel-Thrush
Cole Tit	Tree-Sparrow	Swallow	Magpie
Greater Tit	Pied Wagtail	Yellow-hammer	Wood-Pigeon
Wren	Chaffinch	Thrush	Robin
Gold-Crest	Greenfinch	Blackbird	Hedge-Sparrow
Willow-Wren			

Within an area of a mile from the house I have noticed the following birds and found many of their nests: blackcap, bullfinch, carrion-crow, chiffchaff, sandpiper, snipe, cormorant, creeper, curlew, cuckoo, dipper, fieldfare, goldfinch, grasshopper warbler, green woodpecker, grey wagtail, heron, hawfinch, jackdaw, jay, kingfisher, land-rail, whitethroat and lesser whitethroat, linnet, long-tailed tit, martin, moorhen, nightjar, partridge, pheasant, owl (brown), plover, redstart, ring-ousel, rook, skylark, sparrow-hawk, stonechat, seagull, starling, titlark, wheatear, wild duck, reed-warbler, garden-warbler, siskin and sand-martin. Crossbills occasionally visit Trefriw and the golden oriole has been seen at Llanrwst. As an example of the perseverance of some birds in nesting I may quote the following: A pair of spotted flycatchers built in our summer-house, and laid three eggs, but objecting to the lawn-mower, deserted immediately. We took the eggs, and after about five days removed the nest, whereupon the pair built a new nest promptly, in exactly the same spot. The hen laid five eggs, and evidently the birds had overcome their dislike to gardening operations, for neither mowing-machine nor children at croquet appeared to disturb them in the least. The young ones were hatched and reared in due course.

Ffynnon Bedr, Llanbedr, Vale of Conway. ANGELA BRAZIL.

537. A Garden Full of Birds.—I have made a list of all the birds observed in my garden in hopes of beating those described by Mr. Daubeny in the August NATURE NOTES. Some of his are more uncommon, but I have forty-five species. The garden is about 150 yards square, and a small tidal river runs through part of it.

Pheasant	Blue Tit	Greenfinch	Willow-Wren
Partridge	Cole Tit	Bullfinch	Moorhen
Missel-Thrush	Marsh-Tit	Goldfinch	Kingfisher
Thrush	Long-tailed Tit	Hawfinch	Green Woodpecker
Blackbird	Nuthatch	Sparrow	Lesser Spotted Woodpecker
Starling	Tree-Creeper	Robin	
Swallow	Spotted Flycatcher	Wren	Wryneck
House-Martin	Pied Wagtail	Gold-Crest	Rook
Swift	Grey Wagtail	Hedge-Sparrow	Jackdaw
Wood-Pigeon	Yellow-hammer	Chiffchaff	Barn Owl
Turtle-Dove	Linnet	Blackcap	Brown Owl
Great Tit	Chaffinch		

One year there was a Red-backed Shrike's nest, and this year I have seen a Fire-Crested Wren, but not exactly in the garden. Just beyond are Skylarks, but no Pipits.

Botley Hill, Botley, Hants, August 9, 1907. M. S. JENKYNS.

538. A Garden Full of Birds.—It is quite refreshing to be able to "go one better" than Mr. E. T. Daubeny. To his list of thirty-six birds I can add four—the marsh-tit, the long-tailed tit, the wood-warbler, and whinchat, and if I may go 250 yards from the house I may add the nightingale, the sedge-warbler and the kestrel. Another 200 yards and I could include the hawfinch, the redstart, the moorhen and the green and lesser spotted woodpecker, but I cannot include the three following species mentioned in Mr. Daubeny's list—the nuthatch, which is a rare bird in these parts; the lesser redpole, which is only seen in the winter, although it breeds annually some two miles away; and the garden-warbler. The space is somewhat the same but the garden proper less.

Highfields, Redditch, August 6, 1907. DONALD MATTHEWS.

539. Bird Protection *v.* Bird Destruction.—Your correspondent W. is, I think, on some points, needlessly alarmed; and (if I may be pardoned for saying so) in some danger of spoiling his case by over-statement. I should be glad if you will allow me to quote on the other side from a published letter of Mr. O. V. Aplin, F.L.S., M.B.O.U. Mr. Aplin, at the outset, writes: "I have

been, and I still am, a strong bird protectionist." Yet he writes (giving reasons which it would take too much space to quote): "So far as agriculture, in its common-sense, is concerned (the production of corn, root, and green crops), the increase of the following species should be checked, and their present numbers reduced—rook, jackdaw, sparrow (the worst of all), starling, wood-pigeon (the large ring-dove only)." His concluding words are as follows: "I wish to emphasise these points:—

(1) The increase in the number of some resident species.

(2) The enormous increase of the starling, by leaps and bounds this last few years.

(3) The change in the feeding habits of certain birds within the last few years. (Seven years ago I was not aware that the blackbird or starling touched a plum in my garden. Now fruit on trees in the open has to be gathered unripe, and . . . it is sometimes all lost. The seed and sprouting-corn eating habit of the starling is new.)

(4) The effect on other species of the undue increase of certain species. I *think* it is due to the starling that the nuthatch (a most useful bird) formerly common about this village [Bloxham, Oxon.], has almost disappeared. The starling usurps all kinds of breeding holes, turning the other birds out; and I have known it turn out the nuthatch. [The nuthatch has become as scarce here as in Bloxham; and I have also known it turned out by the starling from a tree close to my own garden.]

"I have no doubt," Mr. Aplin concludes, "(as a preserver of birds generally) that the birds I have alluded to [these include the blue tit and bullfinch] should (in the interests of farmers, and of birds in general) be kept in check, and their present numbers reduced in some cases."

"As to means" he says earlier in his letter, "I can only suggest head money (to be paid out only by those competent to identify the heads) and the preservation of the sparrow-hawk," to which I would venture to add "and the kestrel." I have done but scant justice to the case presented by Mr. Aplin; but I need hardly say that he does not write as one ignorant of his subject, or as an advocate of indiscriminate destruction.

W. seems to have some fear that the sparrow may be exterminated; and I have seen a letter in a London newspaper suggesting that Kentish hop-growers, if they encourage sparrow-clubs, have only themselves to blame for the prevalence of aphides in their hop-gardens. Certainly the notion that sparrows are scarce in Kent can hardly have come from any one knowing much of the county. We see far more than we like in our wheat-fields, and, I might add, in our house-martin's nests.

Otham Parsonage,
Maidstone.

F. M. MILLARD.

540. A Python's Meals.—Perhaps the following extract from the Zoology Section of the *Journal of the Royal Microscopical Society* for August, 1907, may be of interest to some of our readers who are apparently incredulous as to the capability of pythons in the matter of swallowing: "W. Hartmann (*Zool.*, Anzeig. xxxi., 1907, pp. 270-2) describes an astonishing sight which he saw in Hagenbeck's Zoological Garden. A specimen of *Python reticulata*, about 25 ft. in length, swallowed, on June 7, 1906, a swan weighing 18 lbs. and two days later a roebuck of 67 lbs. Another swallowed within two days two roebucks of 28 lbs. and 39 lbs., and soon thereafter a chamois of 71 lbs. In two and a half hours only the hind quarters and the limbs of the prey were visible. When a flashlight photograph was suddenly taken the python disgorged its booty in the space of half a minute." "A. Sokolowsky reports on the same subject (Tom. cit. pp. 293-6), in a few days a weight of 84 lbs. was swallowed; 138 lbs. in nine days. The pharynx can be dilated to a width of 1 m. 40-45 cm. A goat of 84 lbs. in weight was engulfed and took nine days to digest. After a meal the pythons remain inert in the water. The appetite for a second meal a few days after the first is remarkable. On the other hand, two specimens remained from spring to November without eating at all, and yet persisted in good condition."—*Journal of the Royal Microscopical Society*, 1907, Part 4, p. 414.)

541. Bee Stings.—In No. 497 it is asked, "Do bees lose their stings?" It is a matter of common experience to those who have been stung by hive bees that the sting is left in their cuticle. At times I have had my leather gloves covered with the stings of irate bees. The sting of the hive bee is serrated, and when left in any object death must ensue, because in its struggles to liberate itself some of the insect's entrails are torn away. If, however, a bee inserts its sting into something that does not retain it, such as a woollen glove, death does not result. At certain times of the year weak swarms are often attacked and robbed by other bees. In the fight that takes place many are killed by being stung to death; but the one that kills the other does not die, because it is able to withdraw its sting from the body of its victim. In killing the drones in the autumn, the worker bee does not die from stinging her male relatives. The sting of the wasp, not being so serrated as that of the bee, is more easily withdrawn, and is seldom left in the wound that it inflicts. I have been stung a dozen times in succession by a bumble-bee without its losing its sting. In its serration the sting of the bumble-bee is more like that of the wasp than of the bee that makes our honey.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

542. Bud Destruction.—The plants of Sea Thrift referred to in Query 123 (p. 117), as having their buds *nipped off*, were either suffering from the attacks of sparrows or caterpillars. Those cases in which the insides of the buds were missing were not, I think, brought about by birds, but may have been due to insects or to the weather, or some change in the soil, or an unhealthy condition of the plants. It is difficult to tell without examination of the actual plants. Had birds been the culprits in the case of Mr. Evans's plants, the buds would have been obviously torn and spoilt, but the fact that only the centres, *i.e.*, the flowers, were "eaten away" points to some constitutional cause, since an insect would have left some trace. I have had similar cases in my own plants of Thrift, and could never find out the reason, but noticed that the buds were always so in sickly or dying plants. I may say, incidentally, that much of the damage done by sparrows in gardens may be averted by putting out large flower-pot saucers of water, for them to drink at, *all the year round.*

Hale End, Chingford. C. NICHOLSON.

543. What is a Perennial?—Mr. Hastie (p. 154) raises a question which has no doubt, wholly or in part, puzzled many people, and, so far as the terms "annual" and "biennial" are concerned, is not very satisfactorily settled in books on botany and gardening. I will try to explain the terms as I understand them, merely premising (1) that I am dealing with the *terms* only and not their application to this, that, and the other specific plant, and (2) that certain foreign plants are perennial in their native country, but only annual or biennial when grown in this. An "annual," then, is a plant which germinates from seed, attains full growth, flowers, and drops its seeds within the space of a single year, by which, I understand, is meant the twelve months from January to December inclusive; in this case the seed lies dormant through the winter and germinates in spring. A "biennial" germinates from seed dropped, say, in summer and grows up to a certain point, at which it remains throughout the winter; growth recommences in the spring, and flowering and seeding take place in due course. The difference between an annual and a biennial is clearly that the former passes the winter as a seed, the latter as an immature plant; the resemblance is that neither of them can live longer than twelve months (approximately), and seeds are the only method by which the species can be continued in a state of Nature. A "perennial," on the contrary, lives continuously on year after year, and whether it grows up each year from the same stock is quite immaterial; it is substantially the same plant, in that there is no complete destruction of its individuality by death. It will thus be seen that the method by which a plant *reproduces* itself does not directly affect the question under consideration, which relates only to the plant itself and its duration of life. I am aware that the above explanation is not always in accordance with the statements in botanical books that such and such a plant is a biennial or an annual, but that is not the fault of the explanation! For instance, all the small wild species of *Geranium* are usually

described in systematic floras as annuals, while, as a matter of fact, they are, without exception I think, biennials, strictly speaking, because they pass the winter as immature plants. It would seem, however, that there is no hard and fast distinction between annuals and biennials, since the same species is sometimes one and sometimes the other, according to whether its seeds are dropped early in the season or late, dependent on weather conditions.

Hale End, Chingford. C. NICHOLSON.

544. Orchis or Orchids?—Mr. Hastie asks, incidentally (No. 524), Why will people keep calling an orchis "an orchid? May I retort, courteously, Who says they do? Every *Orchis* is an orchid, but every orchid is not an *Orchis*, as Mr. Hastie could have ascertained from any average dictionary. The term "orchid" is English, and applicable to any individual of any species belonging to the order *Orchideæ*; hence one may speak of a *Habenaria*, an *Ophrys*, a *Dendrobium*, or an *Orchis* as an orchid. On the other hand, the term "orchis" is pure Greek, and scientifically only applicable strictly to a member of the genus *Orchis;* hence the Spotted Orchis really means that particular member of the genus *Orchis*, which is distinguished by spots and called scientifically *Orchis maculata*. The phrase "Bee Orchis" is incorrect, as there is no member of the genus *Orchis* resembling a bee in any way; the correct English name is therefore "Bee Orchid." Further, as an example, the Marsh Helleborine (*Epipactis palustris*) may be called an orchid correctly, but not an *orchis*. I am aware that these remarks will not be borne out by some systematic botanies and floras I could name, but the English nomenclature in such books is often inconsistent and leaves a good deal to be desired.

Hale End, Chingford. C. NICHOLSON.

545. Orchids.—In reference to the appearance of bee orchids reported in August NATURE NOTES by M. J. T., two or three years ago I discovered quite a quantity of Globe-flowers in a meadow not far from here. I had never seen them before nor since. I happened to be in Oswestry one day about the same time, and I saw an old woman seated in the station there with a bunch of these lovely flowers, and when I asked her where she got them, she said they grew near her house, but she had never seen them bloom since she was a girl, and was quite pathetic over it! I feel sure the explanation in both cases is that the meadows being invariably grazed the cattle had kept them down. I should like to suggest to M. J. T. that that may probably explain why the orchids appeared in Surrey. F. L. R.

Rhyl, North Wales.

[Our correspondent's suggestion is a good one. *Tulipa sylvestris* is similarly recorded from Muswell Hill in the "Flora of Middlesex" as always cut with the hay.—ED. *N.N.*]

546 May Blossom.—May blossom was still to be seen in the hedges on June 30.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

NATURAL HISTORY QUERIES.

128. Abnormal Carrot.—A friend of mine found, a few days ago, a curious specimen of wild carrot between Sanderstead and Warlingham. The whole of the florets were of a dark red colour. The outer umbels had grown up irregularly an inch and more above the inner ones. This must have been a sport, although we know that the outer umbels always grow slightly above the inner ones, giving the whole a slightly hollow appearance when in flower and a rather greater one when in seed. But the different colour of the florets looks like a separate species, although I can find no mention of it in any botanical book. May I ask whether this coloured-flowering carrot is not a great rarity, or is it met with often?

Hampstead, PETER HASTIE.
August 20.

[We can find no record of such a variation.—ED., *N.N.*]

129. Abnormal Dandelion.—The other day I found a curious sport of this plant. A fine head rose to a height of fully two feet and round the base of the flower was a large bunch of leaves just as are to be seen at the base of the plant. It gave it a very queer appearance. Is this usual?

Grange-over-Sands, Lancashire. R. C. LOWTHER.

[The malformation has been recorded, but is, I think, uncommon.—ED. *N.N.*]

EXCHANGE DESIRED.

FUNGI IN NORTH WALES.

THE wet summer promises an unusually early crop of autumn fungi. As the Conway Valley affords many beautiful varieties I should be glad to exchange specimens with any Selbornian who is collecting. I could send, in their season, *Hygrophorus miniatus, H. chlorophanus, H. psittacinus, H. pratensis and H. virgineus, Tricholoma nudum, Stropharia æruginosa, Hydnum repandum, Peziza aurantia* and *coccinea*, and several of the Clavarias. I should be glad to secure *Geaster sericeus and Lepiota Rachodes.*

Ffynnon Bedr, Llanbedr, Tal y Cafn, R.S.O., N. Wales. ANGELA BRAZIL.

ASTRONOMICAL NOTES FOR SEPTEMBER

Mars will be visible in the southern sky in the evenings, but is declining in brightness. Near moon on 16th.

Jupiter will be a morning star rising at midnight on the 18th.

Saturn will be favourably visible during the whole night, and now appears practically devoid of rings. Near moon on 21st.

Daniel's comet will be seen before sunrise, in Cancer, as a naked eye object.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members stand for election: *Central Society.*—Miss Phyllis Fleming; F. Moore, Esq.; A. H. Wheelwright, Esq.

Ealing Branch.—G. W. Thompson, Esq.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of September 16 and October 21, for the purpose of issuing books to members.

EXCURSIONS.

Saturday, July 27.—The excursion on this day was rather more of an undertaking than usual, seeing that it necessitated a journey to Marlow by train and, afterwards, a drive of fourteen miles. Nevertheless, twelve members availed themselves of the kind invitation of Mr. Alfred Heneage Cocks, M.A., F.S.A., F.Z.S., who met the party at Fingest Church. This building is remarkable for its fine Norman tower on the one hand, which is surmounted by a roof with two ridges, while on the other it is noteworthy because in the nave only four persons can sit in a row. In fact, it was nearly possible for two members, holding hands, to reach from one wall to the other. After leaving the church, the members proceeded to Poynetts, the residence of Mr. Cocks, which is situated in the hamlet of Skirmett, that lies in a valley among the Buckinghamshire hills. Here Mr. Cocks showed his collection of living British carnivorous animals, which includes wild cats, martens, pole-cats, otters and badgers. After seeing these and some curious cats which are partly wild, partly Abyssinian and partly domestic cat, the party was entertained by Mr. Cocks to tea. In the evening the members were

privileged to see the collections of photographs of whales and of Laplanders which Mr. Cocks made on his journeys in the north. The embroideries which he also brought back came in for a good deal of attention, and his collection of photographs of all the herds of British wild white cattle, so-called, was well worth seeing. Added to all this, was the kindness and geniality of the host, and the thanks that were offered to him were far from being of a formal character.

Saturday, August 10.—Assembling at Loughton Station, a party of fourteen Selbornians started at 3 p.m. for Cowper's (or Loughton) Camp, *via* Debden Slade. On arriving, the party disposed itself comfortably on the heather and bracken, while Mr. C. Nicholson, the leader, gave a short address on the two ancient camps in the Forest. The party next proceeded through Little and Great Monk Woods aud Long Running to Ambresbury Banks, where tea was taken at the keeper's cottage, after which all but one of the party walked back to Chingford Station and caught the 8.55 train to London. No flowers were seen worthy of special record, but the heather was just beginning to open. Although somewhat cloudy and threatening at the start, the afternoon was lovely and there was a clear sunset.

Ambresbury Banks has been long known as a camp, but that at Loughton was discovered by Mr. B. H. Cowper in 1872. The camps cover about 11 acres each and are of similar construction, a ditch some 6 to 10 ft. deep and of triangular section surrounding a rampart of corresponding height. At the instance of the Essex Field Club, sections were cut through the ramparts of both camps in 1881 and 1882, and parts of the silting of the ditch dug out to lay bare the old surface. Burnt earth, charcoal, flint flakes and fragments of pottery were found, and after examination of the latter, General Pitt-Rivers decided that both camps are undoubtedly of early British origin, that at Loughton being perhaps the older, as the other is certainly in a better state of preservation. The triangular section of the ditches was considered as evidence that the camps were intended as permanent structures, and there seems no ground whatever for the tradition that either of them was in any way concerned with the overthrow of Boadicea by the Romans.

Saturday, August 17.—A dozen Selbornians assembled at Clandon, and under the able guidance of Mr. A. B. Wilkinson, wended their way through the pretty village and across Clandon Park, the seat of the Earl of Onslow. Clandon Church was visited and then the party proceeded to Newland's Corner from which vantage point a magnificent view is to be seen. Range upon range of hills melt into the blue distance, Leith Hill bounds the scene on the left hand, Hambledon on the right. On a clear day, such as the present occasion afforded, portions of the South Downs are to be seen in the far distance. In the foreground of the picture are the green-clad slopes leading to the valley running between Dorking and Guildford, where, embowered in trees, nestle the pretty villages of Gomshall, Shere and Albury, the whole forming a vista finer than any other within easy reach of London. No special botanical finds were recorded, but the hedges were aglow with dogwood, bryony and hawthorn berries, and much of the landscape purple-hued with the opening heather. A striking feature was the abundance of late blackberry blossom. The return journey led through Merrow to Clandon, where the members entrained for town, having had a most enjoyable ramble in this charming part of Surrey.

FORTHCOMING EVENTS.

Council and Committee Meetings.

Monday, September 16.—General Purposes Committee at 5.30 p.m.
Tuesday, September 24.—Council Meeting at 5.30 p.m.

Excursions.

Saturday, September 7. — Wanstead Park and Church. Fast train leaves Liverpool Street (G.E.R., West Suburban Station) for Leytonstone at 2.41 p.m. Return fare, 8d. Assemble at Leytonstone Station at 3 p.m. Omnibus to Wanstead Church, 1d. Tea at Keeper's Cottage, 9d. Return *via* Bushwood and Tom Hood's house. Wanstead Park is the old seat of the Earl of Leicester, where he entertained Queen Elizabeth. It now contains a large heronry. Guide, Mr. A. B. Hornblower, B.E.N.A.

Saturday, September 14.—Bickley, roundabout Pett's Wood and Grays Common. Trains leave Victoria (S.E.R.), at 2.30 p.m., Holborn Viaduct at 2.25, and St. Paul's at 2.27 p.m. Take return tickets to Bickley, 2s. from Victoria, 1s. 8d. from Holborn. Meet *outside* Bickley Station at 3.5 p.m. Guide, Mr. C. M. Mühlberg.

Saturday, September 21.—Visit to Mill Hill School. Leave King's Cross 2.5 p.m., or Broad Street 2.10 p.m. for Totteridge (single tickets). Walk to Mill Hill School, where the party will kindly be entertained to tea, and the guide will give some account of Peter Collinson and Richard Antony Salisbury. After tea return by way of Edgware. Guide, Professor Boulger.

Saturday, September 28.—Geological ramble round Ightham, Kent. Train leaves St. Paul's Station for Wrotham at 1.17 p.m. Special cheap return tickets, 3s. 2d. Members intending to join must write to the Excursions Secretary before September 25, enclosing Postal Order, 3s. 2d., and be at the station to receive their tickets from him ten minutes before the departure of the train.

This completes the arrangements for the Summer Session, the Winter Excursions will start in November as usual. It is hoped that next month members will be permitted to attend the Annual Fungus Foray of the Essex Field Club. Details will appear in the October number.

All communications with regard to Excursions should be addressed to Mr. H. H. Poole, *Hon. Excursions Secretary*, at 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

George Murray.—The common Milkwort (*Polygala vulgaris*). See Johns' "Flowers of the Field," 29th Edition, p. 93.

Major C. Vipan.—*Euonymus japonicus* generally blossoms on our southern coasts and on the opposite shore, though not in the London area.

Peter Hastie.—It is impossible to name the Sedge from your description. Triangular stems are the rule in the group. The plant sent from Newland's Corner in *Epipactis media*.

Mrs. Lacey.—Probably wet weather after the formation of flower-buds does tend to produce "vegetative" malformations such as the "hen-and-chicken" you send. Can you send some normal specimens?

Miss Brinkley.—*Agrimonia Eupatoria*, the Common Agrimony. It contains tannin and has some astringent tonic properties, but none to justify its former repute. A decoction made with wine is, says Parkinson, "good against the stings and bitings of serpents."

E. H.—Your plant is undoubtedly *Carduus heterophyllus*, a variable species.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

Crown 8vo, cloth lettered. Price 2/- net, post free.

PROCEEDINGS OF THE CONFERENCE

ON

The Teaching of Hygiene and Temperance in the Universities and Schools of the British Empire.

HELD AT THE

EXAMINATION HALL, VICTORIA EMBANKMENT, LONDON, S.W.

Chairmen:—LORD STRATHCONA, G.C.M.G.
SIR JOHN COCKBURN, K.C.M.G.
SIR JOHN GORST, F.R.S., K.C., M.P.

JOHN BALE, SONS & DANIELSSON, Ltd.
Oxford House, 83-91, Gt. Titchfield St., Oxford St., London, W.

CASES FOR BINDING

NATURE NOTES

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

PRICE 1s. 1d. NET, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd., 83-91, Gt. Titchfield St., London, W.,

They will be pleased to bind same in Cases on receipt of 1s. 3d. net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

A SUPPLEMENT TO THE

'BIRDS OF NEW ZEALAND.'

By the late SIR WALTER L. BULLER, K.C.M.G., F.R.S.

Vol. I. of the "Supplement" embraces 250 pages of Imperial quarto, and contains, besides a steel-engraved frontispiece, five hand-coloured plates and forty text illustrations.

Vol. II. contains seven hand-coloured plates (making twelve in all), with numerous text illustrations.

The price to subscribers is Three Guineas per volume; and the edition is limited to 500 copies.

A Prospectus may be obtained on application to

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.

In square crown 8vo, tastefully printed and bound, price **6s.** net.

THE FLOWERS AND TREES OF PALESTINE

A Short Account of some of the Flora of that Country. By AUGUSTA A. TEMPLE. Illustrated by 40 Photographs from nature, with an extended Glossary of Flower Names.

"The work is exceedingly well done, and is interesting from cover to cover. It is a welcome addition to existing literature on the subject, and the information upon the flowers and trees of Palestine is clearly and tersely set out and admirably arranged for reference, whilst the illustrations, of which there are forty, are exquisite."—*Worcester Herald.*

"As a Scripture history prize book in schools this book should have a large sale."—*Farm, Field, and Fireside.*

"Such a volume would be an invaluable boon to all future travellers in the Holy Land."—*Methodist Times.*

"The writer is to be congratulated on her great knowledge and the charming and entertaining methods in which it has been displayed in these pages."—*Bookman.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

No. 214. Vol. XVIII. October, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
SUNSPOTS AND THE WEATHER	181
THE BRAIN OF THE LOWER ANIMAL AS COMPARED WITH THAT OF MAN	182
SELBORNIANA	184
REVIEWS AND EXCHANGES	188
NATURAL HISTORY NOTES.—Some Nature Notes from Sussex.—The Cuckoo.—Tits in Letter-Box.—Habits of the Nuthatch.—Sheldrakes.—Starlings and Caterpillars.—Pierced Eggs.—A Garden Full of Birds.—White Swallow.—A Piebald Nest.—Pythons.—Shark in Sandown Bay.—Swarming of Ants	193
NATURAL HISTORY QUERIES.—Tea Roses.—Date of Flowering of Catalpa in London.—Water Lilies.—Bullock's Museum	196
ASTRONOMICAL NOTES FOR OCTOBER, 1907	198
SELBORNE SOCIETY NOTICES	198
ANSWERS TO CORRESPONDENTS	200

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

Photographic Specialities for Natural History Workers.

GOERZ-ANSCHUTZ

Folding Camera

Will take Photographs of Birds on the Wing.

Speed up to 1/1200th Second.

Shutter Almost Noiseless.

Best for Definition.

CAN BE SEPARATED.

Single Combination is an admirable Long Focus Lens.

GOERZ . . . . TELEPHOTO . ATTACHMENT.

Gives Large Size Photographs of Timid Birds and Animals from a Distance. Indispensable to Bird Photographers.

The above are used by the well known bird photographer, Mr. Oliver G. Pike.

SEND FOR BOOKLET No. 99 TO—

C. P. GOERZ, 1-6, Holborn Circus, London, E.C.

(Wholesale and Colonial only), or

The STEREOSCOPIC Co., 106 & 108, REGENT STREET, LONDON, W.

ALL RIGHTS RESERVED.

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 214. OCTOBER, 1907. Vol. XVIII.

SUN SPOTS AND THE WEATHER.

THE recent period of great solar activity, which has been interesting the astronomical world during the past year, gives rise to a certain amount of speculation as to whether the long continued cycle of unpropitious weather is caused by, or has any relation to, the abnormal quantity of sun spots that made their appearance in the latter part of 1902 and the summer of 1903. As a general rule, it may be asserted that the interval ensuing between one period of maximum solar activity and another, is approximately one of two years' duration!

The period prior to that which has now passed was in 1892, a year which did not suffer from any great amount of inclemency in the weather. Yet it is difficult to lay down any hard and fast rule of maxima and minima sun-spot activity. We have (1) on record, that Flamstead, after having made observation of the great sun spot of 1684, declared that not for eight years had he witnessed a similar phenomenon. Sir R. Ball, again, states that in 1705 it was asserted that the sun's surface had hardly been marred by more than two groups of spots during a period extending over so long a time as sixty years. It is difficult to suppose that during those sixty years there had been an unprecedented and prolonged lack of rainfall owing to the paucity of sun spots.

This long period of solar inactivity came to an end in the following year, when no fewer than eight distinct groups of sun spots were visible at one and the same time.

Observations made on February 28, revealed one very large spot, approaching the limb of the sun. This spot was triangular in form, and was surrounded by bright rays of diversified form, known as faculæ. This fleecy looking matter, which so often is observed in connection with large spots, is diversified clouds, which are wafted about in the sun's atmosphere. The spot itself is a cavity in the photosphere of the sun, caused by the

absorption of light by atmospheric layers of greater pressure than are at work in other regions. The area covered by one of these largest spots is often of enormous extent, varying from 10 to 40,000 miles in length.

That the appearance of sun spots does not appreciably affect the amount of rainfall, has been shown by the publication of a series of solar observations in chart form by the very able observer of solar phenomenon, Mr. E. W. Maunder, of Greenwich. This chart presents a record of the maxima and minima sun-spot periods, together with a record of the rainfall during a period extending over a number of years. A close comparison of the sun-spot chart with the weather record, indicates no possible alliance between great sun-spot activity and abnormal weather; after having examined such evidence one feels compelled to accept the dictum of Lord Kelvin, that instances in which an agreement is noticed between solar activity and atmospheric depression, must be placed in the category of accidental occurrences. Other reasons must be found for the long-continued period of wet weather, which now happily begins to show some signs of departure. Many authorities connected it with the volcanic eruption of the West Indies, which occurred some time since. There seems to be some grounds for their contention; it is not in the province of this article to prove or disprove the theory, but the fact that such a considerable number of people appear to hold the view that sun-spot appearances and much wet weather are in direct relation, one to the other, led to the thought that some objection to this opinion might not at the present time be entirely inopportune or out of place.

F. L. RAYMOND.

THE BRAIN OF THE LOWER ANIMALS AS COMPARED WITH THAT OF MAN.

AS is well known, the largest part of the brain consists of two lobes called the cerebral hemispheres, covering a third division, the cerebellum or little brain. Flourens considered that the principal function of this latter organ was to co-ordinate voluntary motion, may it not also be the seat of instinct as differentiated from reason? In man (and in most mammals) the surface of the cerebrum is marked by numerous convolutions, which are most complex in the most intellectual and highly civilised races. As to the weight of the brain, those which weigh most are not invariably associated with the highest intellectual powers, although as a general rule those races which possess (on the average) the heaviest and most perfectly convoluted brains are the most civilised. As a proof that the cerebrum is the chief seat of reason, it has been certified

that cases of arrested development of this organ are always accompanied by imbecility or even idiocy. Moreover, in all animals the degree of intelligence varies with the relative size of the cerebrum as compared with other parts of the brain.

The brain in the higher members of the order Primates is quite distinct in type from that of the Lemurs and all quadrupeds, *i.e.*, the cerebellum is entirely covered by the cerebral hemispheres as it is in man. Although the brains of the three large "man-like" apes—the Gorilla, Orang-Outang, and Chimpanzee—are clearly distinguishable from one another, it is impossible to say that any one of the three is of higher conformation than the others. For example, the brain of the Orang comes first with regard to the number and complexity of the convolutions, whereas that of the Gorilla takes first place by the greater vertical height of the cerebral hemispheres. Again, the width of the latter as seen from above is perhaps greatest in the Chimpanzee, though on the whole this ape has a simpler brain than either the Orang or Gorilla.

Among other orders of the mammalian class no definite relation has been traced between the type of brain and the intelligence of the animal; for instance, while in the Beaver the cerebral hemispheres are almost smooth, they are more convoluted in the sheep than in the dog. The explanation of this apparent anomaly may perhaps be found in the fact that these three quadrupeds belong to three different orders, for in animals which are closely allied to one another, there is undoubtedly some relation between intelligence and complexity of brain. Accordingly we may observe that the brain of the dog is rather more complex than that of the cat, more than half the cerebellum in the latter animal being visible from above, whereas in the dog it is almost covered by the brain proper. It is a remarkable fact that the Cetacea have more complex brains than any other group of mammals, except the "man-like apes" and the elephant—the most sagacious of quadrupeds.

Although no definite serial order can be traced from the lower to the higher orders of mammals, it is manifest that the brain of the "man-like" ape shows almost as great an advance in type over that of even the most intelligent quadrupeds as the latter show over birds. There is little doubt that the mental powers of all animals are largely dependent on the development of a special sense endowment; thus the Quadrumana have the sense of touch almost as highly developed as man himself, and this is also the case with the elephant. Likewise among the flesh-eaters the superior intelligence of the dog may be largely due to his abnormal sense of smell; however, the mental faculties of the wild dog are not very different from those of the wolf. It would seem, therefore, that it is only his long association with mankind—dating back to prehistoric times —that gives the dog his mental superiority over these two last-

mentioned animals. On the other hand the elephant, notwithstanding his comparatively recent domestication, is quite the equal of the dog in reasoning power. High, however, as the intelligence of these two quadrupeds undoubtedly is, it is much below that of many apes and monkeys. Is it not therefore probable that, had these latter been associated with man for an equal number of generations, they (his nearer allies) would have become at least as useful to him as the elephant, horse, or dog?

As illustrating the mental capacities of the higher apes (apart from any special training), the following may be quoted: An orang, formerly living in Paris, was in the habit, precisely at the dinner-hour, of opening a door of a room in which he took his meals in company with several persons. Being worried by the excessive punctuality of his charge, the ape's keeper one day shortened the rope by tying three knots in it. After several unsuccessful attempts to reach the key, the Orang, recognising the nature of the obstacle which stood in his way, climbed the rope till he was *above the knots, untied all three, and triumphantly* opened the door. The same animal was able to open another door by trying each out of a bunch of fifteen keys till he found the right one; he also used as a lever an iron bar which was given to him.

In the other four classes of the Vertebrata there is no regular division of the cerebrum into lobes, moreover the membrane with which it is covered—known as the grey matter—gradually decreases in thickness, being almost non-existent in the lower orders of the fishes.

The actions of social insects, as bees and wasps, are frequently cited as a remarkable display of intelligence among the lower animals. Wonderful, however, as their operations doubtless are, they are esseutially of an instinctive nature, and show none of the initiative seen in the actions of most mammals and even some birds.

F. W. Watts.

SELBORNIANA.

London Wild Birds.—A curious rural charm—suggestive of a London embosomed in trees and musical with thrush and linnet, instead of with the hoot of motors—breathes through no less prosaic a document than a London County Council "legal notice" published this week.

It is, briefly, an announcement that from henceforward the "close time" for all wild birds throughout the county of London will be extended as from January 31 to September 1; and that certain birds, and their eggs, shall be protected all the year, with a fine of £5 per bird and £1 per egg taken or destroyed.

There follows a list of fifty-four "smaller fowls," the very

existence of some of which in London at all might well come as a surprise to the average Cockney. Many, for instance, whose London bird-lore extends little farther than to recognise the blackbird, the thrush, the starling, the robin, the lark and the swallow, may be interested to find the "buzzard and honey buzzard" officially recognised by the County Council as quite possible London visitors.

Then there is our smallest hawk—known as the "hobby"—kingfisher, the woodpecker, the merlin, the osprey, the owl, the shrike, the "bearded tit, or reed-pheasant," the "landrail, or corncrake," the night-jar, the "wry-neck, or cuckoo's mate, or snake-bird," and so on and so on.

This is not all. So that there shall be no mistake about the scope of the edict, certain parishes are enumerated where the taking of wild birds in general is prohibited on Sundays, but permitted during the week. The names of some of these are occasionally pretty enough, but the reality sometimes bears a strange relation to the possibility of present-day bird-catching.

Thus the dweller in St. Botolph's, Aldgate, is somewhat tantalisingly informed that he may catch there as many yellow-hammers or whip-poor-wills as he can during the six days, but on the Sabbath he must forbear! So, too, with the "Hamlet of Mile End Old Town," Saffron Hill, the "Hamlet of Ratcliff," St. Saviour, "including the Liberty of the Clink," and certain other quarters where one fancies the gaol-bird would be, nowadays the most characteristic, if not the only ornithological treasure.

With all this, however, as a *Daily Chronicle* representative learnt yesterday in a talk with Mr. Wilfred Webb, hon. sec. of the Selborne Society, nothing could be more necessary from one point of view, and hopeful from another, than this latest charter of the London birds.

"Naturally the list would surprise the man in the street," said Mr. Webb, "but I assure you there are very few birds on the Council's list that are not comparatively common visitors to London. Certainly none of them are impossible. The rarest, perhaps, is the buzzard—which is seldom seen in England at all. But still, it may always turn up somewhere, and if it did so in London it would probably be shot immediately, without some such protection.

"As for the rest, you would be amazed how many of them are to be seen constantly by anyone who takes the trouble to watch. As you know, the nightingale sings still within the four-mile radius at Hampstead; sedge-warblers are heard again and again in the London parks, as also chaffinches, gold-finches, tits, flycatchers, white-throats, stonechats, redstarts, wrens, and many another of the Council's protegées.

"The wood-pigeons, by the way—which I notice are not protected—are, if anything, increasing in numbers, in places like Kensington Gardens, and only the other day I saw a wild dabchick in St. James's Park.

"So far as concerns the whole of London, the Council list could be easily increased. As you may know, the Selborne Society has a "bird sanctuary" near Hanwell, which is at any rate in the London postal district. There we have already noticed no fewer than sixty-seven different kinds of wild birds—including kingfishers, lapwings, jays, jackdaws, tree-pipits, fieldfares, snipe, turtle-doves, and many not mentioned by the Council. This very year I have been able to photograph there a cuckoo in a whitethroat's nest.

"'On the other hand,' Mr. Webb continued, "though it may seem strange in some of the central parishes, there has been a genuine, crying need for this protection all over London. You must remember that there is no necessity for the bird-catchers to go away into the woods to do their work. Wherever there is a bit of waste ground—a railway embankment or anything like that—they will take their 'call-bird' and some lime, and food, and lure any number of little songsters.

"You would be astonished to find what an all-prevalent affair this business of bird-catching is. I have known of cases in the Council parks where special men have had to be told off to watch even a blackbird or thrush's nest. These town-poachers nearly always go out on Sunday—hence the Council's provision.

"Another very shrewd and necessary thing about the Council's list is the including of different names for the same bird. These bird-catching fellows are extremely cute in pleading ignorance. For example, if you charge them with catching a 'wryneck' they will swear that they did not know that name and were always brought up to call it a 'cuckoo's mate' or 'snake-bird.' I am afraid they are 'snake-birds' themselves often enough!"—*Daily Chronicle.*

WILD BIRDS PROTECTION ORDERS.—We have raised from the Home Office an Order, dated September 9, 1907, with reference to the county of Norfolk, repealing that of November, 1905, extending the close time, adding the Great Bustard, Crossbill, Sand Martin and Bearded Tit to the Schedule, protecting all eggs in most of the "Broads" and all birds on Sundays within the same areas, protecting Owls, Kingfisher, Goldfinch, Bitterns, &c., throughout the county during the whole year, and also the eggs of a number of species.

We have also received Orders, dated September 12, for the counties of Brecon and Cumberland, repealing those of February 14, 1898, and December 19, 1901, respectively. The former adds many species to the Schedule, protects the eggs of a number of species throughout the county, and especially prohibits the killing of the Kite. The latter adds the Raven, Peregrine, Kestrel, Merlin, Buzzard, and one or two more species to the Schedule, and protects their eggs and those of some other species.

BIRDS OF PARADISE :—

"Some information has reached me which affords clear evidence of the length to which the trade in skins and feathers of brightly-coloured birds is now carried on for the purpose of personal adornment. A traveller who has recently arrived here from the Australasian and other islands in Oceania tells me that from the six or seven districts of North and West Dutch New Guinea, at a low estimate, close upon 20,000 skins of Paradise birds are annually exported. At Humboldt's Bay, in New Guinea, he came across two Chinese traders, who were despatching to Europe about 1,200 skins of this most beautiful of all birds every three months. One grand long-plumaged species has been very nearly exterminated, and last year only seventy skins of this particular species were exported from Jobi, though all the natives in the place were engaged hunting for specimens. It is evident, indeed, that the Bird of Paradsie is doomed to extinction before long if the present rate of slaughter is maintained."—*Birmingham Daily Post.*

"JOURNALISTIC HYPOCRISY."—A correspondent comments under this heading on the fact that while the editor of *The Country-Side* protests against the extermination of our wild plants, the advertisement columns of his newspaper contain various offers of British Orchids at "6d. each," "250 choice wild species of Cotteswold plants, cheap," &c. We would point out to our correspondent that editors cannot always control the advertisement pages. He says that he uses the word "exterminate" because "not a single British will live in an ordinary garden," for which reason the "Kew Rockery" is known as the "orchid cemetery." Our correspondent adds, "It would be well to find means of enlisting the sympathy of land owners who should be asked to instruct their game-keepers to bundle off all prowlers who can show no permit; and in the case of the advertising prowler it would be an easy matter to send him a warning direct from the County Council in whose district he announces his ravages."

CROSBY HALL.—We were unfortunately—like many others—premature in our rejoicing over the preservation of this historic building. In spite of the King's strongly-expressed wish, in spite of the protest of the Society of Antiquaries, of our own Society, and of everybody who knows anything about it, the powers of vandalism are, apparently, to have their way. It is doubtful now whether anything worth saving can be saved. It is time we had a public Department that should be able in cases such as this to say "Hands off!"

A SALUTARY WARNING.—A prompt commentary on our remarks in last month's number came on September 14, when John Raine was fined £3 at Keswick Police-court for cutting his name on one of the stones in the Druids' Circle, one of our few protected Ancient Monuments. There is, it seems, a board bearing a cautionary notice, and the miscreant had written his name and address on it.

SWISS SCENERY.—In an admirable leading article the *Times* of September 4 calls attention to the forthcoming meeting of

the English branch of the League for the Protection of Swiss Scenery and Natural Beauty, a body numbering over 4,500 members. The article alludes more particularly to the proposed Matterhorn railway and that between Göschenen and Andermatt; and only our limited space prevents our quoting from it at length.

THE ROYAL PHOTOGRAPHIC SOCIETY AND COLOUR-PHOTOGRAPHY.—The fifty-second annual exhibition of this Society, which is being held at the New Gallery until the 26th inst., presents many points of interest to naturalists. Mr. Douglas English exhibits the life-history of a British Mud Wasp (*Odynerus spinipes*) and a colour photograph of the Musk Beetle (*Aromia moschatæ*); Mr. A. J. Kirby sends a fine picture of Polar Bears; Mr. F. Martin-Duncan, a good portrait of a Kangaroo; and Messrs. G. A. Booth and Alfred Taylor some excellent studies of Herons. Mr. Oliver Pike has portraits of six British Owls; Mr. Daniel Finlayson, some interesting illustrations of seed-dispersal; Mr. J. Howden-Wilkie, some admirable cloud-studies; and Miss L. E. Walter, studies of Swiss glaciers. In the Pictorial Section are many excellent pictures of snow, chiefly by German artists; but interest chiefly centres round the pictures illustrating Messrs. Lumière's latest "antochrome" plates, by which a coloured transparent positive is obtained by one exposure. These plates are apparently not glass, and they are coated with starch grains dyed blue-violet, green and red-orange, and so blended as to appear of a neutral grey. This forms a light-filter and produces a coloured picture granulated, but with granulations more microscopic than those of a Missenbach block. This is, undoubtedly, the greatest step in advance that has yet been made in the domain of colour-photography.

REVIEWS AND EXCHANGES.

Memorials of Linnæus: a Collection of Portraits, Manuscripts, Specimens and Books exhibited to commemorate the Bicentenary of his Birth. British Museum (Natural History). Special Guides No. 3. 8½ inches × 5½ inches. Pp. 16. Price 3d.

We have previously called attention to the valuable educational work carried out by the Trustees of the British Museum in the publication of trustworthy popular guides to the collections under their care, at prices which must represent little more than the bare cost of paper and printing. This Guide, however, represents more than most of its predecessors, for it is the catalogue of a collection specially got together to bring home to the general public something of the life and work of the great naturalist, the bicentenary of whose birth the scientific world has this year been celebrating. Such a collection could not well have been got together outside of London; and this little pamphlet of "Memorials" is, if anything, too modest in the way in which it deals with its subject. It contains a biography of Linnæus confined to a single page, and another page devoted to the history of his collections, the remainder being

occupied with the descriptive catalogue of the objects exhibited. These include ten portraits, reproductions of two of which are given—in themselves worth more than the price of the Catalogue—more than a dozen important autographs, specimens of plants and fishes from the great naturalist's own collections, including the original specimen of *Linnæa borealis*, which was accompanied by the suggestion that it should bear his name, and copies of Linnæus's chief published works. Incidentally, many interesting details bearing on the history of botany are mentioned, the whole compilation being marked by that scrupulous accuracy which is the tradition of the Department of Botany. Even though it might have added to the price of the pamphlet, we should have liked to see a facsimile of Linnæus's handwriting included, and, perhaps, Ehret's plate illustrating the Sexual System; whilst it might have been well for the "general reader" to have a fuller exposition of the value and limitations of that system, as being, with the binominal system of nomenclature, Linné's main contribution to the advance of botany.

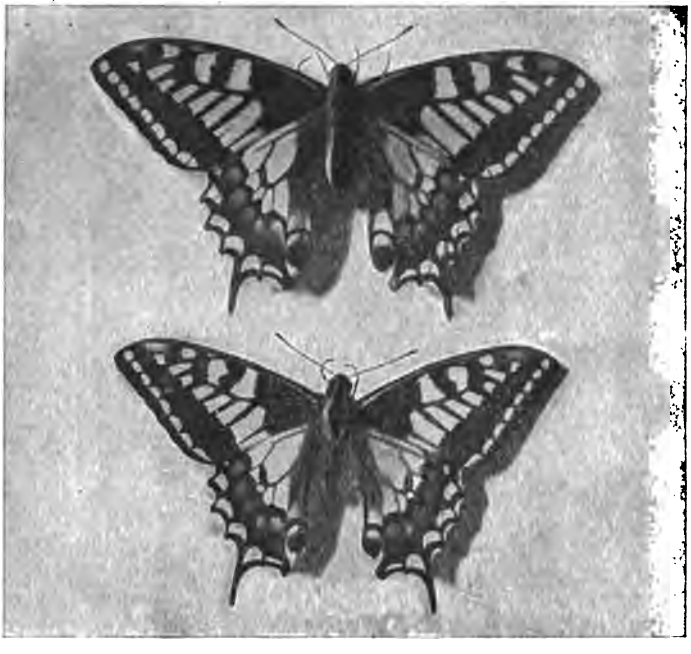
Wild Fruits of the Country-side. Figured and Described by F. E. Hulme. With 36 Illustrations in colours by the Author, and 25 from Photographs. 6⅝ inches × 4½ inches. Pp. 221. Hutchinson and Co. Price 5s. net.

YEW TREE AT COMPTON, BERKSHIRE.
From "Wild Fruits of the Country-side" (by kind permission of Messrs. Hutchinson and Co.).

This is a very pretty little book, of a portable and pocketable size, well bound, with rounded corners, well printed, fully illustrated, interestingly written, and well indexed. Nearly twenty of the illustrations—including the picture of an interesting Yew tree which the publishers kindly allow us to reproduce here—

do not represent fruits; but the rest do. The colour-printing has not in all cases been successful, or its effect is not always pleasing; but the drawing is good and the photographs excellent. We do not expect botany from Mr. Hulme, but he gives us plenty of interesting gossip and excerpts from the old herbals. He has divided his matter into three chapters, trees occupying the middle one, and he wisely curtails his remarks on some plants that he may dilate on others of greater interest. We could wish that he had insisted on some regularity in the use of initial capitals to specific names: *Glutinosa*, *Communis*, *Arvensis*, *Album*, *Vesca*, *Baccata*, and *Fœtidissima* occur in the list of illustrations, and at the heads of the paragraphs all specific names begin with capitals, whilst in the Index we have *Daucus carota* and *Euonymus Europæus*.

Fifty-Two Nature Rambles: a Series of Open-air Talks for Young People. By W. Percival Westell. With 5 Coloured Plates from drawings by C. F. Newall, and 100 Illustrations from Photographs. 8¼ inches × 5½ inches. Pp. 237. Religious Tract Society. Price 3s. 6d.



SWALLOWTAIL BUTTERFLIES.

From "Fifty-two Nature Rambles" (by kind permission of the Religious Tract Society).

Mr. Westell describes a weekly ramble with a small nephew, narrating the flowers they see and the birds they hear, and other Nature notes, throughout the year, in the form of dialogue, which, he suggests, may prove suitable as a "reader" in school. There is sometimes a grandiloquence of phraseology that we think out of place, too much insistence upon names and too much direct didacticism, whilst the dialogue form often irresistibly suggests "Sandford and Merton." "Uncle, that first flower you showed me, the greater stitchwort, we call Billy's buttons. Which is the proper name, please?"

"Call the plant in future the greater stitchwort, as that is the English name by which it is generally known. Billy's buttons is only a local name. Now we must devote the remainder of our walk and talk this morning to our friends the birds; but just observe before watching and listening to our feathered companions, that small garden white butterfly upon the wing, a sure ambassador of spring . . . . along that sunlit hedgerow I saw just now a greater whitethroat, called locally hay-tit and nettle-creeper. I want you in future, however, to refer to this bird as the whitethroat, and be particular to qualify it by mentioning greater whitethroat, as there is a smaller species. . . ."

Mr. Westell, however, if pedantic, is thoroughly Selbornian in his advocacy of the study of common objects as opposed to the collection of rarities. The numerous, varied, and excellent illustrations add to the attractiveness of the book, though often, as in the one lent us by the publishers, they are not alluded to in the text.

Torquay and its Surroundings. By P. H. W. Almy. With a Foreword by Eden Phillpotts. Homeland Handbooks. $7\frac{1}{4}$ inches × $4\frac{7}{8}$ inches. Pp. 116. Homeland Association. Price 1s. net.

If its illustrations are less strikingly attractive than those in some of the previous volumes of the series, this handbook is in most other respects one of the best. It has, of course, the reduced Ordnance map; but there is also a street plan of the town. There is a full account of its history, hygienic recommendations, recreative, religious and educational advantages: a rapid survey of its many literary associations, and descriptions of walks both within and without the borough are also given; and the author has wisely availed himself of the help of several local specialists in drawing up the comprehensive chapter on the Natural History of the district. We would suggest that more stress might well have been laid on Father MacEnery's early insistence on the conclusions to be drawn from his discoveries in Kent's Cavern; and that the Bibliography might be rendered more serviceable by the addition of the prices and of the names of the publishers of the works cited.

Picturesque Spots in Surrey. By Walker Miles. $5\frac{1}{2}$ inches × $4\frac{1}{4}$ inches. Pp. 72. R. E. Taylor & Son. Price 6d. net.

This is a description of a new series of rambles round Epsom, Ewell, Cheam, Banstead, Purley, Oxted, &c., with sixteen illustrations, issued in connection with the recent system of cheap day tickets on the Brighton line, available for

OXTED CHURCH.

From "Picturesque Spots in Surrey" (by kind permission of Messrs. R. E. Taylor & Son).

return from stations other than the one booked to. Mr. Miles is as severely practical as usual; but no one surpasses him in clearness of direction. The Selborne Society's excursions have often included the picturesque church of Oxted, of which the publishers have kindly lent us a view, and the whole district is so near at hand as to be peculiarly attractive to the less active or more leisurely pedestrian.

New Ramble Routes in Middlesex and Herts. By Noah Weston. 5½ inches × 4½ inches. Pp. 48. R. E. Taylor and Son. Price 6d. net.

This addition to an invaluable series deals with the country between Enfield, Barnet and Edgware. The author gives a useful prefatory historical account of the district, and there are sixteen photographic views in the volume. We have tested the description of the rambles by following one over a route we had never before traversed; and though, as the writer warns us, building operations had already introduced a road unmentioned in his account, we never had any difficulty in following the directions given.

A Malformed Antler of a Red Deer, Recent Geological Discoveries at Speeton, &c. Hull Museum Publications, No. 44. By Thomas Sheppard, 8½ inches × 5½ inches. Pp. 7. A. Brown & Sons. Price 1d.

These descriptions of several fossils recently added to the Hull Museum are reprints (with only the original pagination) from the *Naturalist* for July and August, with four illustrations.

Bulbs. By S. Arnott; and *Weather.* By the Hon. H. A. Stanhope. 8⅛ inches × 5½ inches. Pp. 20. Agricultural and Horticultural Association. Price 1d. each.

These two garden books, the eleventh and twelfth of the series edited by Mr. Greening, are as practical and as fully illustrated as those that have preceded them.

The Irish Naturalist for September, issued at the usual price of sixpence, is a special Cork Conference number, comprising 52 pp., and no less than fourteen excellent whole-page plates. The reports of the week's meeting of Field Clubs cover the whole range of Natural History from geology and botany to malacology, and most sections of entomology, the study of vertebrates and that of prehistoric archæology.

The University of Colorado Studies, Vol. IV., No. 4, contains a clavis of the Bees of Boulder County, by Professor T. D. A. Cockerell, comprising 175 species; and also a similar key to the Protozoa of the University campus, by the same author.

Knowledge for September contains, *inter alia*, some supplementary remarks on Dew Ponds, by Mr. E. A. Martin.

The Botanical Gazette of Chicago for July, maintains an exceptionally high standard of original work. It comprises papers on Hybridisation in *Œnothera*, the Anatomy of the Melanostomaceous *Rhexia*, the Sporangium of Ophioglossales, and the Roots of a *Lycopodium*, with six plates.

Nature Reader Monthly for September (Messrs. Charles and Dible), is in most respects as good as usual. It is, however, a pity to apply the terms spores and zoospores to the antherozoids of ferns.

The Young Citizen for September is as good as ever, but perpetuates an amusing printer's error in our August issue. Our printer "ran on" the heading "Board of Agriculture Leaflets" at the end of our notice of the Young Citizen Butterfly-case, and accordingly our notice is now reproduced and credited to the Board of Agriculture!

RECEIVED.—*Bird-Lore* for July and August; *The Victorian Naturalist* for August; *The Estate Magazine* for August and September; and *The Naturalist*, *The Animals' Friend*, and *British Birds* for September.

NATURAL HISTORY NOTES.

547. Some Nature Notes from Sussex.—During two weeks in August I spent a very pleasant time at a farmhouse in Sussex, just over four miles from Hailsham, in the village of Cowbeach. On the day of my arrival it was with great delight that I noted for the first time the splendour of the wild beauty of Sussex lanes. On either side of the lane which led to my destination the hedgerows were almost covered with the long trailing strands of bramble, the pink and white blossoms and green berries mingling with the bloom of sweet-smelling honeysuckle, while above and beneath the hedges bracken grew in abundance. A little further on, to my sorrow, I saw that some of the hedges had been deprived of their natural beauty—cut down to one half their height, and the banks cleared of the green and flowering herbage. Lying on the side of the road, ready to be carted away, were pieces of bramble, giant foxgloves, and numerous other familiar wayside flowers that are a source of delight to the country rambler. Why is it, I wonder, that this cutting and clipping is not postponed till the winter months, when our country lanes are not in all the glory of their wild beauty?

In a large pond at the back of the farmhouse some little moorhens (*Gallinula chloropus*) have their retreat. They were so shy that only by taking up a position a few yards away, and remaining very quiet, was I able to watch their movements. In and out of the reeds these little timid creatures hunted for food, and sometimes, when all was quiet, they would come out on to the banks and pick up what little bits the ducks had left of their meal. But, on the approaching sound of footsteps, they would scuttle away out of sight beneath the overhanging hedges on the banks of the pond.

I was very much surprised when informed that some barn owls inhabited a spacious loft in a part of the house and had two young ones. All day could be heard the peculiar screeching of these owlets, a noise which at times resembled the deep snoring of a person asleep. And when dusk fell, two big forms of a whitish appearance would emerge from the loft in search of prey for the young. On a clear moonlight night these birds could be seen catching mice on the hay-stacks near by.

One morning, while sitting on a stump of a tree in a wood, where, except for the soughing of the wind in the trees and the occasional cooing of wood-pigeons, no other sound could be heard, I was suddenly startled by a shrill squealing near at hand. Within a few paces from me were two little figures struggling, and I at first thought that squirrels were in deadly combat. I ran to the spot to find that a weasel had been on a poaching expedition and caught a young rabbit. On my approach he at once dropped his victim, but not before he had killed it. In spite of my presence he stopped by the entrance of his burrow, and from there he watched me pick up his capture; and not until I made a threatening action did he attempt to enter his hole, where he still continued to survey my movements.

Through this very same wood a pretty winding path separates the thickly grown ash and hazel trees, and on either side the boughs are interlaced overhead, and the edges of the path are bordered by luxuriant moss, with a species of sword fern growing out of it. What little space there was between the trees was covered with the spreading fronds of the wood-fern, and slightly hidden beneath these I found a solitary violet. What a pleasure it was to find this little flower at this time of the year and in such splendid surroundings! Round and about were plants of the primrose, and long dried stems from which hung the seed-vessels of the blue-bell, or "blue-bottle" as they are called by the natives. I was told that the District Council prohibited the taking away of the primrose roots, but in no way interfered with the picking of the flowers, and in the springtime these woods must certainly be a beautiful sight.

In the course of a walk along the hedgerows of a pea-field one afternoon, I disturbed some partridges that were feeding among the peas. So suddenly did I come upon them that one, more frightened than the rest, took refuge in the undergrowth of the ditch and kept cover for some time after. This field I found to be a regular resort of partridges and wood-pigeons, who managed between them to do considerable damage to the crop.

37, *Alwyne Villas*, CHAS. E. J. HANNETT.
Canonbury, N.

548. The Cuckoo.—Mr. Daubeny's notes on the above (533) would have been more telling if he could have told us that he himself saw the cuckoo's three eggs in the same nest, and better still, if he had seen the two birds ejected from the nest. I have only met one person in my life who has *seen* the cuckoo eject the egg out of the nest, after many hours of continuous watching (C. Reeves, living in Reigate). I have heard the cuckoo in Malvern on August 26, as distinctly as I heard him this year for the first time on March 31. You cannot mistake the soft resonance of the note, the opposite exactly of the jarring cry. The only occasion I have *seen* the bird flying and uttering his beautiful note was at Malvern, where I lived in the Graham Road. I put my head out of the high window at the moment the bird flew very slowly above my head, and I could see distinctly the movement in his throat. But he often calls on the wing.

17, *Glover Road, Reigate.* HARRIET BRUCE BLAIR.

549. Mr. C. Nicholson says (533) that he doubts whether the Latin word *Cuculus* mean a "cuckoo," and that in an old Latin dictionary there is no reference to the cuckoo under the word *cuculus*.

An old, and probably our greatest, authority on the Latin language, "Ainsworth," gives as the primary meaning of *cuculus*—"a cuckoo," and he gives for his authority an example *Cuculus cuculat* (Auct. Philom. 35), literally translated "The cuckoo cuckoos," that is, emits the sound of cuckoo. May I suggest that perhaps Mr. Nicholson might have accidentally turned up the word *Cucullus*, which means a "hood."

The secondary meaning of *cuculus* arises from the practice of the cuckoo in placing its progeny in the nests of other birds, to be brought up by them. The difference is that in the case of the birds, the mother is the party deceived, whereas, among human beings, the father is deceived, with the privity of the mother.

The termination *—us*, is the common Latin termination, especially for proper names; and, whatever the derivation of the word, the *—us* must be added at the end. Mr. C. Nicholson says that if the word were intended to express the bird's cry, the *—lus* would be omitted. That would leave *cucu* as the word, but then such a termination would never be permitted in Latin.

Mr. Nicolson also says that in the bird's cry, the first syllable is short and the second long. I have frequently listened to the cry, and I should say that the second syllable is undoubtedly short.

Hampstead, PETER HASTIE.
September 11, 1907.

550. Tits in Letter-box.—My letter-box is becoming a place of zoological resort on a limited scale. This year two successive broods of blue tits were hatched out in it and duly fledged, after which I hoped to be able to use the box for its legitimate purpose till next nesting-time; but three days ago the servant, on going for the letters when the postman came, reported that there was a small queer animal with a long tail curled up in the box and fast asleep. This I found to be a dormouse, which had run up the paling and entered through the perpendicular slit. I put some cotton-wool in for its bed, with a few shelled nuts and some water, all of which were afterwards found to have been made use of. This morning, lo and behold! a second full-sized dormouse was found in the box. Both were fast asleep in the wool, and a quantity of dry leaves had also been brought in by them. Only a higher intelligence than human can explain how these two little creatures communicated with each other and formed a resolution to make this box their home. They can get out again whenever they are disposed, in the same way as they entered; unless, like the fox in the fable, they became too fat; but I cannot bring myself to quicken their departure. There are some human beings who would gladly sleep as easily and soundly as they do.

Buxted, Sussex, A. L. HUSSEY.
September 5, 7

551. Habits of the Nuthatch.—On May 20 I saw a nuthatch alight on the low roof of a building close to where I was standing. It ran or climbed nimbly about for a few seconds, and then began tearing off the moss growing on the tiles, letting it fall in large pieces into the road beneath. It did this by

thrusting his powerful beak under each piece and forcing it upwards, but did not, while I was watching it, appear to find any insect food under the moss. I know of no other British bird than this which can run with ease head foremost down a perpendicular surface; it being the common habit of the woodpeckers and also of the tree-creeper, when searching for insects, to alight low down on a tree trunk and make their way more or less directly upwards. A pair of nuthatches have for many years come to our window in the winter to be fed, devouring indiscriminately nuts, hempseed, maize and bread. Bits of hard crust they carry off to a large elm close by, pushing them into crevices in the bark as they do nuts, and then pecking at them. One winter some food was placed daily on the ground near where a stake happened to have been driven into the earth. Instead of approaching the spot in the usual manner of small birds in general, the nuthatches must needs first alight on the top of the stake, and then run down it to the ground. G. T. ROPE.

552. Sheldrakes.—While staying recently on the Ayrshire coast with a very intelligent fisherman, he told me he had eight sheldrake eggs brought him, which he hatched under a common fowl, and all thrived. He prevented them from flying away by cutting one of their wings. A trip came to the place and the trippers stoned seven of them and smashed their bodies to pulp. The eighth was taken by his boy in a basket to a farm house one and a half miles away, he walking with it along the railway line. The bird, although unable to fly, reappeared the next day, having been seen to walk back exactly the way it was taken. It is now able to fly, roosts with the fowl, and has never been known to enter the sea. W. B.

553. Starlings and Caterpillars.—Amidst bad conditions at my back door my boy planted a few cabbages. The white butterfly found them out and the caterpillars were legion. Yesterday a flock of starlings were noticed on the cabbages busy at something. Now there are no caterpillars. W. B.

554. Pierced Eggs.—Some time ago a pseudo-naturalists' paper asked for notes *re* the hatching results of pierced eggs. A friend of mine pierced eggs in three nests, two of which he did not keep under strict observation. The third one, although they were far advanced towards hatching and pierced so that blood issued, were duly hatched, and he tells me he could perceive no difference in the appearance of the young birds, which duly fled away. W. B.

555. A Garden Full of Birds.—I am glad to find Mr. Donald Matthews, in No. 538, can "go one better" in the number of birds his garden contains. When, however, he extends the radius to 450 yards from his house, I fancy I can turn the tables and beat him. Within that distance of me, besides those already named as living in my garden, some, by no means all, of the birds, that occur, most of which breed here, are as follows:—

Peregrine (occasional).	Wild Duck.
Kestrel.	Canada Goose (come and go).
Sparrow Hawk.	Teal.
Brown Owl (dozens).	Snipe.
Barn Owl (many).	Jack Snipe.
Long-Eared Owl.	Redshank (many)
Short-Eared Owl.	Water Rail.
Scops-Eared Owl (a colony near).	Moorhen.
Little Owl (turned down).	Coot.
Green Woodpecker.	Dabchick.
Greater Spotted Woodpecker.	Green Sandpiper (common).
Lesser Spotted Woodpecker.	Black-Headed Gull (thousands).
Heron.	Nightjar.
Kingfisher (dozens).	Hawfinch.
Norfolk Plover (vast flocks).	Crossbill.
Green Plover.	Reed-Sparrow.
Ring Plover.	Reed-Warbler.
Gadwall.	Nightingale.

This little lot is hard to beat, in quality at all events, and might be greatly extended.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

556. White Swallow.—There is a white swallow in this village which is condemned to be shot and stuffed, but not by me. If this albino escapes the gun its chances of living are very small. The other swallows chase and hunt it, and to its enemies it is only too conspicuous. Beyond being a curiosity, unnatural albinism in our British birds does not appeal to me, and is often hideous. A cock pheasant, disfigured by patches of white here and there, is frequently put into a glass case instead of into the pot. However, "*de gustibus non est disputandum.*" Man often perpetuates and develops freaks: Nature ruthlessly destroys them.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

557. A Piebald Nest.—There is rather a curious house-martin's nest built into the support of an iron shoot over my coach-house door. It is constructed of five perpendicular sections of mud, which are alternately white and brown. To produce this effect the birds reversed the ordinary plan of construction. Instead of beginning at the bottom and putting their work in horizontal layers, they commenced at the side and built round from one side to the other; using ordinary mud at one time and then varying it with pellets of chalk. The different coloured sections are almost as regular as the seams in a football.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

558. Pythons.—"A Python's meals," No. 540, tells us the weight of animals actually swallowed by the largest snakes, and agrees with what one has often read. No authentic case has been recorded of their making a meal off larger animals than goats and small kinds of deer. I have stuck out all along that full-grown tigers are too large and dangerous for them to tackle and swallow. When it can be proved they have performed such a feat, standard works on the matter will have to be re-written.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

559. Shark in Sandown Bay.—On August 26 a shark, measuring 5 feet long and weighing nearly a hundredweight, got entangled in a fisherman's net about two miles off one of the points here. It was duly captured and exhibited. The shark, it is surmised, was attracted by the shoals of mackerel about. Last year a larger specimen was caught within 300 to 400 yards of the same spot.

Shanklin, Isle of Wight, September 7, 1907. CECIL CLARKE.

560. Swarming of Ants.—I observed great numbers of winged ants on the afternoon of Tuesday, August 27, and they were similarly prevalent in other parts of this city. The nests of these insects appeared to be all bustle, life and activity, as the winged members of each community took their departure for other scenes.

Last year the swarming occurred on August 6, about three weeks earlier than on the recent occasion. These insects always select a very warm day in which to effect their migrations.

Bishopston, Bristol, September 9, 1907. W. F. DENNING.

NATURAL HISTORY QUERIES.

130. Tea Roses.—Why are tea roses so called, and how are tea roses distinguished from any other varieties?

[Tea roses are so called from their perfume, which is supposed to resemble that of tea. They are in the main descended from *Rosa indica*, probably a Chinese species, among the distinctive characters of which are an obovate, scarlet fruit, a stout habit, brown prickles, and large leaves of three to five leaflets, dark above and glaucous beneath.—ED. *N.N.*]

131. Date of Flowering of Catalpa in London.—I was somewhat surprised (and pleased) to find a Catalpa in full flower on September 7, in

the disused burial-ground behind the Chapel of the Ascension, Hyde Park Place. A forest tree flowering in autumn is, indeed, one to be cultivated; but is not the date named an unusually late one? The fine Catalpa at Devonshire Lodge, Marylebone Road, was only breaking flower on August 20, whilst last year it was in full flower on July 26. This year the earliest flowers I noticed were on a tree in Brunswick Square on August 19, but these had been out some days.

3, *Willow Mansions*, HUGH BOYD WATT.
West Hampstead, N.W
September, 13, 1907.

[The books say July; but, speaking from recollection, we should not think September unusual. The tree was in full flower, but showing little sign of going over, in the third week in August in the South of Brittany, and a few flowers remained on the trees on the sunny westerly slope of Richmond Terrace on September 14.—ED. *N.N.*

132. Water Lilies.—It has been stated in a recent number of a popular Natural History magazine that the Water Lily (*Castalia alba*), sinks below the surface after dark, appearing again above the water at sun-rise. Could any of your readers inform me if this is a botanical fact, or merely a poetical myth?

9, *Park Crescent, Brighton*. EMMA M. NICHOLSON.

[The late Dr. Masters writes: "The flowers are interesting from their power of collapsing their petals and of drooping on to the surface of the water, or even sinking below its surface, during the night, emerging and expanding again in the sunlight. This peculiarity is also noticed in several of the foreign kinds, as in the Egyptian *N. Lotus*, of which Moore, in his "Paradise and the Peri," thus sings:—

"Those virgin lilies, all the night
Bathing their beauties in the lake,
That they may rise more fresh and bright
When their beloved sun's awake."

John Smith, writing of *Victoria regia*, in 1871, says: "The flower consists of numerous petals of a pure white, and when fully expanded emits a powerful and pleasant odour. During the morning of the next day it partially closes, expanding again in the afternoon, the colour being then pink, and on the third day it finally closes and withers." Perhaps the change of colour here suggested is only the turning back of the outer white petals and the spreading of the previously erect inner pink ones. The phenomena have been definitely associated with pollination, it being stated that if *Victoria* be pollinated on the first or second day of opening it does not open again. The fruit in most water-lilies forms and ripens below the surface of the water. Some careful observations on these points are desirable.—ED. *N.N.*]

133. Bullock's Museum.—Some eighty or ninety years ago there was in London a show known as "Bullock's Museum." I remember we had a book describing it, and it is mentioned in "Frank" by Miss Edgeworth. Can you or any of your readers say what has become of it?

GEORGE H. COURTENY.

[William Bullock, a north-countryman, opened in Piccadilly a museum and what he called a Pantherion. He had collected animals in Africa, and this was an attempt to show the larger mammals in a tropical scene. The show was, for a time, very remunerative, and its proprietor then built the Egyptian Hall, which has only recently been demolished. Bullock's collection was dispersed by auction.—ED. *N.N.*]

ASTRONOMICAL NOTES FOR OCTOBER.

Mars will be visible as an evening star. He will be near the moon on 14th.

Jupiter will appear as a brilliant morning star, rising on 1st soon after midnight and on 31st at 10.44 p.m. Near moon on October 2nd at 6 a.m.

Saturn may be well seen in the evenings and will be apparently ringless. Near moon on 18th.

Shooting Stars will be numerous on 18th to 22nd.

Daniel's Comet is now too near to the sun to be well observed.

The *Zodiacal Light* may be well seen before sunrise.

W. F. D.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members were elected at the last meeting of Council. *Central Society:* Ernest J. Brown, Esq.; H. Cecil, Esq.; Miss Phyllis Fleming; C. H. Grinling, Esq.; Miss A. Hick; Miss Mary A. Hollingsworth; The Rev. A. C. Holthouse; F. Moore, Esq.; Miss Sugg; A. H. Wheelwright, Esq.

Ealing Branch.—D'Arcy Bannerman, Esq.; Mrs. Bannerman; George Fox, Esq.; William Moore, Esq.; Fred. G. Thompson, Esq.; G. W. Thompson, Esq.; The Rev. B. Seymour Tupholme; Master Geoffrey Webb.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of October 21 and November 18, for the purpose of issuing books to members.

The Honorary Librarian has pleasure in announcing the following additions to the Library:—"Birds and their Nests and Eggs," by George A. Vos; Birds of Bempton Cliffs, by E. W. Wade; *Bulletin of the British Ornithologists' Club* (Report on the Migration of Summer Residents in the Spring of 1906); *Bulletin of the New York Botanical Garden;* Flowers and Trees of Palestine, by Augusta A. Temple; Twenty Country Rambles round Leeds, by John Hornby; The Wit of the Wild, by Ernest Ingersoll; Woodlanders and Field Folk, by John Watson, all kindly presented by the Editor.

EXCURSIONS.

Saturday, August 24.—A party of eight Selbornians met at Winchmore Hill, and an interesting ramble, under the leadership of Mr. Oliver G. Pike, F.R.P.S., was taken through a portion of Winchmore Hill, and thence through World's End Lane to Enfield. From the latter place the party returned to Winchmore Hill by another route, and tea was taken. Afterwards the evening was spent in Winchmore Hill Woods, that delightful tract of old England that once formed part of the famous Enfield Chase, and is still the best piece of real country that divides Winchmore Hill from the ever stretching arms of London. Several interesting birds were observed in this fine estate. On the lake was seen a pair of Great Crested Grebe with their young, a rare sight so near London. Of the more common birds dabchicks and owls were seen, while the woodpecker and nightjar were heard. Some water voles were watched at close quarters and excited much interest by their lack of fear.

Saturday, August 31.—A party of seventeen Selbornians, led by Mr. George Watts, took as their destination Chalfont St. Giles, by way of Chorley Wood. The weather proved fine, and a pleasant walk across the fields (some of which unfortunately are being slowly spoiled by the devastating hand of the speculating builder) furnished, owing to the lateness of the season, a remarkably varied and plentiful supply of botanical specimens, which were much appreciated. After tea

a brief visit was made to the cottage occupied by John Milton and his third wife, during ten months of the Plague year. Here it was that, with Thomas Ellwood, he continued working at his manuscript of Paradise Lost, and it is worthy of note that this cottage is the only building now left of all his residences; consequently we find some American enthusiasts conceived the idea of buying the house and removing it to America, just as the attempt has been made with Shakespeare's house at Stratford-on-Avon, and with William Penn's body which lies at Jordans, some two miles away. Happily, public-spiritedness has frustrated this contemplated act of barbarous vandalism, and the "pretty box," as he called it, remains much the same as it was in the middle of the seventeenth century. A peep at the church concluded the visit, where the garrulous custodian expatiated on the import and antiquity of the mural paintings with their superimposed inscriptions, giving vivid and pathetic details concerning the monuments, brasses, and objects of interest relating to bygone Gardyners, Godolphins, Osbornes, Radcliffes, Fleetwoods and others, who have had a hand in making the history of the English people. Time alone curtailed the fulness of his recital. A delightful sunset followed the ramblers through cornfields and a striking pine avenue to Grove Park, whence their way by the woods, amidst the falling shadows, found them once again at the point of departure.

Saturday, September 7.—A party of fifteen Selbornians assembled at Leytonstone and proceeded to Wanstead Church, a severe classic structure dating from 1790, but containing a fine monument in white marble of Sir Josiah Child, Bart., who died in 1699. He was the founder of the banking house of that name, and did, with his successor, Sir Richard, more than anyone to lay out Wanstead Park in its present condition, spending immense sums on it. A visit was also paid to the site of the old church, now only marked by the flat tombstones that formed the floor of the chancel and central aisle, and also to the tomb of the vandal (Dr. Glasse), who had the old building destroyed. The party then repaired to the kennels behind the church to see the Essex drag hounds belonging to Dr. Horsley, and were fortunate in finding them at a meal. Their fine points were much admired. Tea beside a picturesque red-tiled cottage, surrounded by fields in which a large colony of rooks held parliament, prepared all for a long ramble in Wanstead Park, where the meeting took place between Queens Mary and Elizabeth, on the former's journey from Norwich to be crowned, and where the Earl of Leicester frequently entertained Queen Elizabeth. Those who stayed for a prolonged ramble were rewarded by seeing five of the herons from Lincoln's Island in flight. Returning from the park the outskirts of Lake House were passed (now alas, handed over to the builders), where Tom Hood lived and is reputed to have written "The Song of the Shirt," and where he certainly wrote "The Epping Hunt" and the novel "Tilney Hall." Then the fine double avenues of elms, known as Evelyn Avenue, in Bush Wood, was dimly seen in the twilight as the party returned to the railroad.

Saturday, September 21.—Assembling at Totteridge Station, on the northern boundary of Middlesex, the party crossed the Dollis Brook, one of the upper waters of the Brent, here forming the Hertfordshire boundary, and walked to the picturesque Green, at one extremity of which is the small eighteenth-century church of St. Andrew, with a yew tree undoubtedly far older. It was pointed out by the Guide, Professor Boulger, that this village and that of Mill Hill are situated on patches of pebble-sand, apparently Pliocene, which permit of surface-wells. Opposite the Church, which the party inspected, is Copped Hall, the birth-place of Cardinal Manning. Following a lane by the side of this estate, according to the directions given in the recently issued *New Ramble Routes in Middlesex and Herts*, and crossing several meadows and numerous stiles, they reached Mill Hill, with the extensive buildings of the St. Vincent's Schools. The goal was, however, the large public school a little farther on, where the name of one of the "houses" at once recalled the botanist, Peter Collinson. On the beautiful lawn in front of the fine college the Selbornians were kindly received by Dr. McClure, the Headmaster, and entertained to tea. Professor Boulger then gave an account of Peter Collinson and Richard Antony Salisbury, who both resided on this site. This account will appear in a future issue of NATURE NOTES. Under the guidance of Mr. N. G. B. James, the historian of

the school, the party then inspected the fine cedars, the gigantic Portugal laurel and other relics, arboreal and pictorial, of Peter Collinson, so that the light was already failing when they started on their ramble across the meadows to Edgware. Thirty-five in all joined in the walk, which was unanimously voted a success.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Monday, October 21.—General Purposes Committee at 5.30 p.m.
Tuesday, November 26.—Council Meeting at 5.30 p.m.

EXCURSIONS.

THE ANNUAL FUNGUS FORAY OF THE ESSEX FIELD CLUB.

The Essex Field Club kindly extend an invitation to members of the Selborne Society to attend this ever popular function. The details are not yet fixed, but it will probably take place at Chelmsford on either October 19 or 26. Members wishing to attend should write at once to Mr. H. H. Poole, Honorary Excursions Secretary, at 16, Heathcote Street, W.C., enclosing stamp for reply. The details will then be forwarded directly they are settled.

ANSWERS TO CORRESPONDENTS.

J. L. Otter.—*Astragalus galegiformis* L., a native of South-eastern Europe and of Asia, from Siberia to China, which is in cultivation.

Met.—*Ginkgo biloba* L., the Maiden-hair tree; and *Pyrus Aria* Ehrh., the White Beam, in a wide sense, perhaps nearer to *P. latifolia* Syme.

Miss C. D.—Apparently the larva of the Cockchafer (*Melolontha*).

Donald Mathews.—Both sets of insects shall be reported upon next month.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.
2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.
3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.
4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.
5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.
6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

A SUPPLEMENT TO THE

'BIRDS OF NEW ZEALAND.'

By the late SIR WALTER L. BULLER, K.C.M.G., F.R.S.

Vol. I. of the "Supplement" embraces 250 pages of Imperial quarto, and contains, besides a steel-engraved frontispiece, five hand-coloured plates and forty text illustrations.

Vol. II. contains seven hand-coloured plates (making twelve in all), with numerous text illustrations.

The price to subscribers is Three Guineas per volume; and the edition is limited to 500 copies.

A Prospectus may be obtained on application to

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.

In square crown 8vo, tastefully printed and bound, price **6s.** net.

THE FLOWERS AND TREES OF PALESTINE

A Short Account of some of the Flora of that Country. By AUGUSTA A. TEMPLE.
Illustrated by 40 Photographs from nature, with an extended Glossary of Flower Names.

"The work is exceedingly well done, and is interesting from cover to cover. It is a welcome addition to existing literature on the subject, and the information upon the flowers and trees of Palestine is clearly and tersely set out and admirably arranged for reference, whilst the illustrations, of which there are forty, are exquisite."—*Worcester Herald.*

"As a Scripture history prize book in schools this book should have a large sale."—*Farm, Field, and Fireside.*

"Such a volume would be an invaluable boon to all future travellers in the Holy Land."—*Methodist Times.*

"The writer is to be congratulated on her great knowledge and the charming and entertaining methods in which it has been displayed in these pages."—*Bookman.*

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

Crown 8vo, cloth lettered. Price 2/- net, post free.

PROCEEDINGS OF THE CONFERENCE

ON

The Teaching of Hygiene and Temperance in the Universities and Schools of the British Empire.

HELD AT THE

EXAMINATION HALL, VICTORIA EMBANKMENT, LONDON, S.W.

Chairmen:—LORD STRATHCONA, G.C.M.G.
SIR JOHN COCKBURN, K.C.M.G.
SIR JOHN GORST, F.R.S., K.C., M.P.

JOHN BALE, SONS & DANIELSSON, Ltd.
Oxford House, 83-91, Gt. Titchfield St., Oxford St., London, W.

JUST PUBLISHED.

4to. Beautifully illustrated with 38 full-page Plates and a 5-figure 15-inch coloured Manikin and Key showing all the organs of the body.
Price **12/6** net.

By Eugen Sandow.

Construction and Re-Construction of the Human Body,

Being a descriptive account of his System of Cure by Physical Exercises, with an Introduction

By Dr. Sir A. Conan Doyle.

JOHN BALE, SONS & DANIELSSON, LTD., 83-91, Gt. Titchfield Street, W.
And at all Booksellers and Libraries.

No. 215. Vol. XVIII. November, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

	PAGE
PINES AND MOORLAND	201
THE SITE	206
SELBORNIANA	207
REVIEWS AND EXCHANGES	208
NATURAL HISTORY NOTES.—Bullock's Museum.—Orang.—Dormouse.—Plover.—The Cuckoo.—American Weed and Wild Fowl.—Bird Notes from Highgate.—Swarming of Ants.—"Journalistic Hypocrisy."—Scottish Mountain Trees.—Catalpa.—Convolvulus.—Late Appearances	211
NATURAL HISTORY QUERIES.—Parasitic Plant Growing on Caterpillar ...	216
ASTRONOMICAL NOTES FOR NOVEMBER, 1907	217
SELBORNE SOCIETY NOTICES	217
ANSWERS TO CORRESPONDENTS	220

LONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.
CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

The New "Kearton" Book.

THE
Fairyland of Living Things

Written by RICHARD KEARTON.
Photographs by CHERRY KEARTON.

3s. 6d.

Among writers who have sought to penetrate into the heart of wild free nature none has succeeded so well as Richard Kearton, while his brother Cherry Kearton in photographing the shyest of shy creatures amid the enchantment of their own hidden places, has made us his debtor to an extent we cannot fully appreciate.

OF ALL BOOKSELLERS.

Cassell and Co., Ltd., London

CASES FOR BINDING
NATURE NOTES

CAN BE HAD ON APPLICATION TO THE PUBLISHERS.

PRICE 1s. 1d. NET, post free.

If the Volumes are sent, Carriage Paid, addressed to

Messrs. BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield St., London, W.

They will be pleased to bind same in Cases on receipt of 1s. 3d. net.

Please see that the name of sender is enclosed in parcel, otherwise they cannot be responsible for loss.

ALL RIGHTS RESERVED.

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 215. NOVEMBER, 1907. VOL. XVIII.

PINES AND MOORLAND.

"O, what have I to do with time?
For this the day was made!"

SO true, those many years back. And true again to-day, here in the soul of the country, where the great earth lies in greenest stillness, and time may stand still, may have ceased to be, for all we know or care. So quiet it is, so wrapped in a "plenitude of peace," that one might well imagine the green waving of grasses, and the nodding of tall daisies over Time's grave, and the brown rust creeping, inch by slow inch, on the sharpness of his scythe.

We come slowly, slowly up the lane. Such a lane as it is, too! Surely nowhere such a dear lane as here in Surrey. Winding up slowly, steeper and steeper the higher it climbs, a little lane of rutted gold sand, all the brighter, here and there, for last night's splash of rain. High banks rise on either side, thrusting out frowning brows of knotted tree-roots, all writhen and twisted like the limbs of a gnome. One glances involuntarily into the little hollows as one goes by, half wondering that no weird little brown face peers out—puckered, elfish, unhuman, laughing a shrill cry of a laugh at our slow plodding up the steep, while they, the little earth-people, go so light of foot. Is it only the children that see these things invisible to us, we wonder? We elders—so they tell us—whose hearts have been "heavy with human tears," are blind thereafter for ever to the gnome-folk. But look! If we are waiting wonders, there, up above on the high bank, among the long grasses, rise a few late foxgloves, tall, purple spires stately in the bracken and undergrowth. One always looked at them with a sort of awed wonder in one's early childhood—or, at any rate, I did—as something almost too beautiful to pick, too lonely and aloof, somehow, for such familiarity; much in the same way as, later in life, one hesitates to speak to a fellow-creature upon whose face is

stamped the expression which I can only describe as a strange and aloof "loneliness." And somehow, strange as it sounds, there is something analogous between the attempted intrusion of a coarse mind into the proud privacy of such a soul, and the sight of foxgloves roughly picked by clumsy hands—for to pick a foxglove roughly means to drag it up root and all—a sense of desecration in both. No, we will look and wonder at them afar off; but will leave them standing. All too soon they will be among the things that were, for Autumn's slow footfall is even now to be heard in the woods at sunset.

Still we climb. The air is very still; the wind scarce whispering above its breath. Overhead, each arching tree jealously vying with the other to shut out the sky which peers in dim, thick blue, breathless. Here and there a great pine rises between elm and beech to tell us we are nearing the wonderful pine world. Hush! a stir and scuffle in the undergrowth. We stop and draw into the shadow, as quiet as may be. There is a stirring in the leaves, a little broken rustling, some little furry fellow-creature on his travels, maybe.

Another moment, while we stand motionless, scarce drawing breath, and out of the bracken, down the bank, and on to the road, scuttles a rabbit. He stands for a minute, with long, soft ears erect and twitching nose, scenting the air for the possibility of an enemy. Danger? He thinks not; the quick, bright eyes that seem to see so much have passed us over somehow, and there is time for the pretence of a toilet. Up go the soft little paws over nose and face and long ears; a scratch or two, and he is off like a flash into the shadow and bracken on the other side, a little wonder of fur and life. Safe enough here one reflects happily, as one takes the road again, or, at any rate, with the fair play of his own instinct against the cunning of stoat and weasel, which is more than the poor little creature can boast of when pitted against the strength and much-vaunted intellect of man in the merciless laboratory.

Strange that man should presume to arrogate to himself, as if his just due, not only God's good world, but all the helpless creatures in it, and should imagine, after the thousands upon thousands of ages that saw the earth's slow creation, when man was not and the other creatures were, that he, the late-comer, is yet justified in rifling the great treasury as if garnered in for him alone. Ay, and as if rifling were not sufficient wrong, trample the precious treasures under foot in the blind and brutal shortsightedness of the prodigal, forgetful of the day when he shall be called to give an account of his stewardship. And that that day will surely come—as surely as the seasons follow each other in due succession, or the tides the changing moon—who shall doubt, for if

> "The mills of God grind slowly,
> Yet they grind exceeding small."

Now there is a turn of the twisting lane; a sudden break, and the high bank to our right is topped no longer with trees and bracken, but golden corn, through which the wind comes a-gasping, faint for breath in the dryness of the mellowing corn-spears. We scramble up the bank, and lo, a wide dim stretch of blue world, far and far away, and farther and dimmer yet, a gleaming run of white Downs, just visible, and no more, like the imagined things of a dream. The heat shimmers and quivers over it all, like a flickering pulse of fire; a few frail butterflies come drifting by, dream things, too, and very soft from the green shadows we have just passed coos the wood-pigeon.

Does she really exist, this sleeping dream-world in her golden glow of haze and colour? Or are we dream-creatures walking a magic world?

Ah! come away, lest the spell be too great for us. Let us touch the nodding grasses to wake us up again, to remind us that many another page of the great Story-book waits our turning.

So back we come to our little rutted lane once more; and now the steepness threatens to rob us of the sore-needed breath our few moments' pause in dreamland has just given us. But a short robbery, however, for here we are again upon the level; then a turn to the left, where two or three little sleepy cottages peer lazily out at us from under trailing brows of creeper and honeysuckle, with all the peasant's leisurely unamaze in the half-humorous twinkling of their window-eyes; looking so much part of the earth—windows, walls, and roofs—that one might almost believe them sprung spontaneously from her fertile womb. The shadowy warmth of great pine-woods faces us; there is a sloping sweep of greenest meadow, splashed with a blotch of—is it indeed?—yes, purple heather! lying to our right, and then down runs the steep hill all in a hurry, and carries us with a swinging lightsomeness of foot, very welcome, into the jumbled group of little cottages that call themselves "the village," which, wee as it is, is yet not so wee as to justify us in putting the recollection of it away on a dusty shelf in our mind, and never taking it down again.

You who love what I love, and have come rambling all this way with me to find it, will know why this particular shelf is kept so well dusted, and so free from moth and mildew.

For look! here we turn another page of the great Story-book, and enter into no less a place than the heart of the great pine-world, and know, with that odd quickening of pulse known only to those who love the moorland, that the purple is out on the heather, and the sun high in the blue.

Come! take hands, all fellow-lovers of the blooming heather, and up the slope with me, no matter how steep; up the face of the cliff that shadows the little village, up through gorse and bracken, and up the straggling road, ankle-deep in golden sand. Come quickly!—for there's no time like the present—till high we stand on the stretch of moorland, high over the little village

and the great dim distance, our feet on the springing goodness of the heather, and the sight and smell of it good to eyes and nostrils. O, the good world! O, the glad golden world! Golden comes the sun a-glinting through the swaying heather, as we lie facing skywards, all among its tufted softness, and glad the laughing wind, honey-scented from the paler, shyer ling, all a-bloom. And O! the wonders that earth holds, so quick with life and motion as she is to-day!

Now it is a ferret hop-hopping out of the heather and in again; now a squirrel darting up a tree like a lightning flash. (They need not hurry so from their friends, if only they knew, but they don't, more's the pity.) Now the murmured coo-coo of far-off pigeons, or the tinkling of a cow-bell somewhere out of sight: and running like a refrain through it all, the droning hum of comfortable bees in our ears. No more irresistibly soporific a lullaby than this, on a summer's day, if we are minded to sleep, and no better couch than the good heather.

For the moment, however, our eyes are wakeful. There is so much to see. Look! fellow-lovers, let me show you one or two of Nature's tiny miracles. Deep down, among the twisted heather-roots, the lower leaves of the little whin-bushes have flamed red, as if conscious of the necessity of creating a little sun all of their own, since the real one cannot reach them; and, see you, the wee spiders scurrying up and down so fast, are scarlet too; and there, swinging by its scarce visible chain, from the heather-stem, the tiny caterpillar repeats it in green and purple—such wee, wee things, and yet life! and worth so much trouble in the making, too. There's the puzzle to tease our brains many a time. But ah! the wise great Mother, how wise she is, with a wisdom as near comparable to ours as the mountain to the molehill. Not even one of these infinitesimal lives left unprotected, for she knows they are "bidden to be here," tiny, unnoticed atoms, without which the building of the mighty Edifice would be incomplete.

Another page to turn—more wonders yet and more. Leave the heather-couch and the droning bees for a wee while, and come over the moor with me deep into the great pine woods.

Here is not wonder only, but dim high mystery and a great stillness. Sun and wind are shut out here. So still they stand, these mighty trees, so shadowy in their purple dimness, that it is only when we look up and see their swaying tops as blurred outlines in gleaming gold that we remember there are such things as sun and wind at all. A fairy palace full of the glamour of mystic colour, a place of illusion and enchantment.

We look around, not knowing what may be there next. Is yon high bracken bracken indeed? Look! one vividness of burning green below, and strange cold blue above where the light falls. O! surely a place where fairy things must pass, where surely, in some happy hour, even one or two of us dull mortals must hear the sweet shrill blowing of Pan's pipe, or

luckier still, catch a glimpse of him in and out between the trees; perhaps even

> "Sometimes
> A faun with torches."

Who knows?

Or again, who knows but that these dim mysteries we call trees are not really pillars in the aisles of some vast Cathedral upreared in honour of a mighty faith? the intense quiet but the throbbing silence succeeding æons of passionate prayer? Ay, and yon sudden shrill cry, that we call a jay's note, but an unseen chorister singing—it must be admitted a little out of tune?—We call the place a "pine wood," in common parlance, and lest our friends should call us idiots if we call it otherwise. But, to those who have eyes other than bodily, what it really *is*, who can say?

Nature and we have many moods and many faces, with, indeed, only this difference to be remarked, that whereas Nature's moods are always lovable, we cannot be quite certain of always saying the same for ourselves. However that may be, one thing is certain: that according to our frame of mind at the moment, so will the different moods of Nature be dear to us.

Here and to-day, in the warm September stillness, whether under the pines, or out on the heather, we are conscious of but one thing: that the wide wise smile of the Great Mother holds in it an infinite rest. Here we come, all of us her tried children, and lie down at her feet, with our throbbing heads in the greenness of her lap, and let her sing our weariness and pain and sorrow all away; and sing she will, if we have ears to hear, in a voice that is born out of the wonders of infinity, that holds the dirge of the sea on far shores, and the crying of the gulls at the foam's edge, the rolling of mighty rivers, the gurgling babble of little burns over clear stones, the wind whispering among the reeds, and keening lonesomely over the moorland, the lark's high anthem, and the nightingale's "eternal passion, eternal pain." A voice that is like nothing else in all the world. Ay, and smile a little she will too, with the gentlest, kindliest humour, which is quite as it should be, and very good for us.

Fellow-lovers, is there anything quite so good as this old world, where, as Browning puts it,

> "As God has made it,
> All is beauty?"

G. BRODIE.

THE SITE.

A NAME may be commonplace, but it may also stand for much. So here, some 200 acres of arable land, interspersed with spinnies of Beech, and Fir and Hazel, sloping upward to a down studded with Junipers, we call "the Site," because a proposed mansion has never appeared, and we trust never will. We may be wrong, but from early boyhood it has been to our minds the most lovely spot in all England. The village nestles at its base, the sun-smitten channel glints in the distance with its winding estuaries coming far inland, and the majestic Island guards the approach to our naval metropolis. On the other hand the grey cathedral raises its glorious spire heavenwards above the many woods. There is the fishing village where Canute probably rebuked the waves: in that ancient church, for certain, his fair-haired daughter sleeps. Yes, for old time's sake we love all the landmarks, even yon "folly" tower, the green woods and the virgin downs. Our faithful henchman and I sit on the game-bags and talk of the past, as we smoke the pipe of peace. Did he not teach us boys —who love him as a brother—to stalk our first rabbit, to know and to love every acre of the woodlands below and to study all the wild life and the beauties of "the Site?" Yes, when the early days of catapults and air-guns had passed their generally harmless span, the early misses were explained or condoned, and our ex-soldier friend trained us slowly to persevere and to drink deeply of his sportsman's spirit. There are the red-letter days, the right and left at Landrail, the first Quail, the Partridges with the white horseshoe on their breasts instead of the usual brown, the occasional plum-gray or black Rabbits and the coming of the first Red-legged Partridges. Above all, the days in the woodlands and on the down gave us the love of birds, the wish to master their notes, to discriminate their flights, to note their habits. On "the Site" the Stone Plover still rears its young, the Cirl Bunting is fairly common, and a year ago I saw a fine Hen Harrier and a Peregrine. Occasionally a Hooded or Isle of Wight Crow, as we term them, strays there, and once I flushed a pair of Wild Duck nesting on the down. Sometimes a Snipe rises from the turnip fields, and on any fine afternoon the guinea-fowl chuckle of the Red-legs tells us how the Partridges love the juniper down. Down in the woods below us we think of the possible right and left at Woodcock we boyishly thought too far or too difficult to attempt, or of the Stone Curlews which startled us by rising well in the centre of the wood. There is the dell hole full of burdocks and thistles where we have often watched little parties of Siskins, Redpoles or Goldfinches. There we first gazed on the lovely eggs of the Sparrowhawk and flushed the Nightjar, the young Cuckoo and the Long-Eared Owl, or learnt the "gyp" call of the Greater and the "si si si si si" note of the Lesser Spotted Woodpecker. On those long ridings

through the woods we first saw the Merlin and the Hobby, watched the squealing Rabbit halt to let the persistent Stoat kill it, and could not part them when we shot the pair. There I remember lying in a ditch watching the flocks of Sparrows, Reed-Buntings and Linnets on the stubbles and seeing the observant Sparrow-Hawk plan his attack. At last he swooped right over and past the crouching flocks: they rose for the wood: he turned like lightning and came right through, and in his claws a Sparrow chirped his last. We remember, too, the old gravel-pit where the hibernating Snakes and Adders were exposed in hundreds in mid-winter, and every track has some well-known spot for flowers or butterflies which we found when we were boys. Now it is autumn, the time of reveries; the gun and the White Pheasant are forgotten in the talk over old times on "the Site" we both love. How deeply the homeland beauties have sunk in mind and soul in this beauty spot of Sussex!

W. A. SHAW.

SELBORNIANA.

CROSBY HALL.—The question of the preservation of Crosby Hall has occupied the attention of the Council of the Selborne Society on several occasions, and all steps possible have been taken to secure its preservation. The Lord Avebury, who is President of the Society of Antiquaries, signed a petition of that body in his official capacity as President of the Selborne Society. A special petition was also drawn up and had been signed by the Archbishop of Canterbury, when the news came that the matter had passed out of the hands of the common Council. Letters to the Press were written by Dr. Dudley Buxton, Chairman of Council, and those City Companies who possess no halls were approached with a view to their subscribing to the purchase of Crosby Hall for their common use. As the subscription of the Selborne Society is very small it is not possible to make any adequate contribution to the purchase fund, but an appeal has been made to members and those interested in the work of the Society through the public press. At the time of writing the safety of Crosby Hall is apparently secured by the guarantee of the last £20,000 required by a gentleman who wishes to remain anonymous.

THE CINEMATOGRAPH IN ORNITHOLOGY.—Mr. Oliver G. Pike, who is a member of the Selborne Society, was successful this year in obtaining a number of cinematograph films showing the movements of birds in their natural haunts, and they were exhibited each evening for a month at the Palace Theatre. Most of the pictures were of sea birds, taken on islands in the North, but a striking series showing the hatching of a chicken from the egg is worthy of special mention.

PROTECTING THE OSPREY.—"France has at last taken a step for which a certain section of British opinion has been working a long time. Senegal is one of the regions where the osprey makes its home, and whole regions have been so ravaged in search of the birds' beautiful aigrette that the breed is threatened with extinction. M. Ponty, Governor of Senegal, has prohibited the killing of any of these birds for a period of two years. An effort is also to be made to breed them in captivity for commercial purposes."—*Globe.*

REVIEWS AND EXCHANGES.

Observing and Forecasting the Weather: Meteorology without Instruments. By D. W. Horner. With illustrations from photographs taken by the Author. 7¼ inches × 5 inches. Pp. 46. Witherby and Co. Price 6d. net.

This little book contains chapters on clouds, wind, halos, thunderstorms, weather-sayings, the moon and phenology; and perhaps a careful study of the author's remarks will enable anyone without instruments to forecast the weather almost as well as the Meteorological Office does with them. The two illustrations are hardly worth the mention on the title-page.

The White Horse Stone and its Legend. By F. J. Bennett. Illustrated. 8½ in. × 5½ in. Pp. 12. Oliver, West Malling, Kent. Price 3d.

Mr. Bennett's figures and description of this remarkable Kentish megalith are undoubtedly interesting; but we would deprecate the practice of inventing new names such as the Western Sphinx, and still more the concoction of brand-new "legends" for such structures. Popular mythopœia does not require such assistance.

Report and Transactions of the Ealing Scientific and Microscopical Society for 1906-7.

This annual issue contains full abstracts of nine lectures on a variety of topics. In such a publication generic names should not be printed without initial capitals, nor should Sir E. Ray Lankester's name have appeared as Lancaster. In a town which has grown to the vast extent that Ealing has done within recent years such a society as this, which has, we note, reached thirty years of age, ought not to have to complain of lack of junior members.

The Story of Insect Life. By W. Percival Westell. With 8 coloured plates and 138 illustrations from photographs. 8 inches × 6 inches. Pp. 339. Robert Culley. Price 5s. net.

Volumes from the pen of Mr. Westell seem to make their appearance with dangerous rapidity; but we know the present one to have been for some time in preparation, and we do not think we have read any work by its author of which we have formed such an unqualified good opinion. The study of Natural History now begins at an earlier age than formerly, so that such an old favourite as "Kirby and Spence," or such excellent modern manuals as Professor George Carpenter's, may well be above the heads of our beginners; whilst there is undoubtedly great danger lest "entomology" should begin and end in the collection of butterflies. In spite of the many popular books on the science there was, therefore, room for one dealing with all orders of insects in simple untechnical language; and this is what the present volume does. With no pretension to originality, Mr. Westell has taken great pains to present accurate as well as popular information, and we have detected very few errors, and those of the slightest. "Delpins" (p. 71) is obviously a misprint for "Delpino," and the Cuckoo-pint is not, as stated on p. 62, so called because its "sheath is like a

"NATURE'S MIRROR."
From "The Story of Insect Life" (by kind permission of Mr. Robert Culley).

drinking-cup." The coloured plates by Mr. E. J. Bedford are excellently reproduced, and the numerous photographic illustrations by various artists are mostly very good. Among them is a beautiful series of landscapes by Mr. A. E. Frost—one of which we are permitted to reproduce—illustrating the habitats of aquatic insects. Paper, printing and binding are most creditable to the publisher, and the volume certainly forms a cheap and helpful gift-book for a young naturalist.

DEW-POND IN MAIDEN CASTLE.
From "Neolithic Dew-Ponds and Cattle-Ways" (by kind permission of Messrs. Longmans, Green and Co.).

Neolithic Dew-Ponds ana Cattle-Ways. By Arthur John Hubbard and George Hubbard. With illustrations. Second Edition. 10¼ inches × 7¼ inches. Pp. 116. Longmans, Green and Co. Price 4s. 6d. net.

It is a pleasure to see the second edition of an essay evincing such a thoroughly scientific spirit of investigation as does this work. Among our prehistoric relics none have hitherto been more obscure than dew-ponds, and when the authors first

suggested their connection with cattle-ways the interest of the scientific world was aroused. The additions in this re-issue, including the account of some experiments which they have conducted, show that the authors have not been idle during the last three years. The volume is illustrated by some thirty fine photographic blocks, one of which we reproduce by the publishers' kind permission, and its general "get-up" is such as to fit it for the most critical book-collector.

The Naturalist for October, with six pages of plates, besides other illustrations, and an assortment of articles of even more varied interest than usual, is simply preposterously cheap at 6d.

British Birds for October contains, *inter alia*, continuations of Mr. Pycraft's papers on Nestling Birds and of Mr. Headley's on Wind and Flight.

Nature Reader Monthly for October is another wonderful pennyworth of interesting and accurate information by Mr. Shoosmith, on nettles, cats and a piece of chalk, with twelve excellent illustrations. We like the parallel that dead nettles "are often found growing in company with stinging nettles, as though seeking their protection, just as in the Middle Ages the common people sought protection from their enemies by dwelling as close as possible to a strong castle or fortress."

RECEIVED.—*Board of Agriculture and Fisheries Leaflet*, No. 183 on Sycamore Leaf Blotch (*Rhytisma acerinum*, Fries), No. 193 on Winter-Rot of Potatoes (*Nectria solani*, Pers.), No. 194 on Coltsfoot (*Tussilago Farfara*, L.), No. 196 on the Fertilisers and Feeding Stuffs Act, 1906, and No. 200 on Black-Rot of Cabbages, Turnips, &c. (*Pseudomonas campestris*, E. Smith); *Bird Notes and News*, Autumn Number; *The Victorian Naturalist* and *The American Botanist* for September; *The Irish Naturalist*, *The Animals' Friend*, *The Agricultural Economist* and *The Estate Magazine* for October.

NATURAL HISTORY NOTES.

561. Bullock's Museum.—I remember being taken to see Bullock's Museum about 1822; but instead of stuffed tropical wild beasts there were only a few live reindeer, and Esquimaux, or Laplanders, with their sledges. The deer were in a pen, except the one or two that were harnessed and driven round the smooth and quiet circle. But the chief part of the show was Belzoni's Egyptian curiosities, from which it was called *Belzoni's Museum*, and the new building the *Egyptian Hall*. I distinctly remember the upright figure of a nude mummy, of a vandyke-brown colour and looking as if it had been painted and varnished. Of the rest of the Egyptian catacombs, &c., my recollections, after eighty-five years, are somewhat mixed.

Winscombe, Somerset. THEODORE COMPTON.

562. Orang.—The Orang, which is now at the Zoological Gardens, displays his ingenuity in this way. He selects from his bed a long wheat straw with a head on it. This, with his right hand, he passes through the network of his cage, and dips the head into the tank of water which is on the other side of the passage, and about three feet away. He then draws the water-laden straw to his left hand, with which he passes it to his lips. This action seems to justify the remark of a boy which I overheard: "Well, he's got some brains if he is a monkey."

FRANCIS RAM.

563. Dormouse.—Mr. A. L. Hussey tells us in No. 550 of the doings of a pair of dormice in one of his nesting boxes, and says that "only a higher intelligence than human can explain how these two little creatures communicated with each other, and formed a resolution to make this box their own." In the face of this, as one with only ordinary intelligence, I dare not attempt to "explain," but venture to propound the theory:—

That dormice, in common with the lower animals, are not mere automata.

That dormice, like most, if not all, animals, have a language of their own; and are able to communicate their wants and wishes to each other.

That Mr. Hussey's two dormice exhibited a considerable amount of common sense and business capacity.

EDMUND THOS. DAUBENY.

564. Plover.—In the list of birds in No. 555 there is a mistake. Green plover are about here in "vast flocks" and not Norfolk plover. We have three or four pair of these latter close by, which I often hear uttering their weird cry in the twilight of a summer's evening.

EDMUND THOS. DAUBENY.

565. The Cuckoo.—As it was not my good fortune to be shown the "cuckoo's three eggs in the same nest," I did my little best before communicating No. 533 to NATURE NOTES, by cross-questioning my informant, an intelligent gardener, twice. This man often puts me on to objects of interest. His information was confirmed by the head of the house.

The lady writer of No. 348, who heard the cuckoo on August 26, knocks my date of July 15 into the traditional cocked hat. Mine is the latest date in observations carried over many years, and was confirmed by the unmistakable gurgling note. Small boys have a way of imitating, with no slight success, the cry from which the cuckoo derives its name; but the gurgling note defies imitation in boy, bird, or beast.

EDMUND THOS. DAUBENY.

566. In reply to Mr. Hastie (p. 194) I beg to write as follows: My dictionary also is by Ainsworth, but it is "abridged for the use of schools," so this, no doubt, accounts for its only giving one meaning for *cuculus*. I have since looked up Dr. Murray's magnificent work now appearing, and find that *cuculus* certainly does mean a cuckoo primarily, but the origin of the termination *lus* is not elucidated yet, except that the Sanskrit word appears to be *kôkilas*, which seems to give a clue. Mr. Hastie's explanation misses the point, because even if *cucu* were impossible, as he implies—which it is not, or there would be no such word as *genu* (knee), not to mention others ending in *u* in the nominative case—*cŭcūs* would have been quite sufficient to convey the idea of the bird's cry, and, curiously enough, this very word is given by Dr. Murray as late Latin for "cuckoo." Mr. Hastie has misunderstood my reference to the rendering of the bird's cry in English. I was not speaking of the syllables, but of the vowel sounds—a very different thing; the word "yes," for instance, has a short *vowel*, but it can be drawn out into a very long *syllable* indeed. In this sense I agree that both syllables of the bird's cry are short, and I should like to revise my phonetic rendering of it, as given on page 173. Neither the "c" nor the "k" sounds in the cry, which may be rendered thus, *ŏŏ(g)-ōō*; the first *oo* being sounded as in *good*, as usually pronounced by an Englishman, and the second *oo* as in *coot*; the (g) being inserted to suggest the throatiness so characteristic of the cry and so difficult to imitate. Finally, the first syllable is the accented one, and the interval between the two notes may be anything from a full tone to a major fifth, the lengthening proceeding with the season, broadly speaking, but any one bird may vary the interval in two successive calls.

Hale End, Chingford. C. NICHOLSON, B.E.N.A.

567. American Weed and Wild Fowl.—It has long puzzled me to get at the reason for the great decrease of wild fowl hereabouts in the last few years. Narford Lake once abounded with them. Now, in spite of being as safe a sanctuary as ever, it is almost deserted. The dying of the "American Weed" (*Anacharis alsinastrum*) is most probably the cause. The history of this "submerged aquatic," as far as its introduction into this country is concerned, is "unknown." In my day at Oxford, more than forty years ago, it was said that a relative of mine, the late Dr. Daubeny, the well-known Professor of Botany, and Fellow of Magdalen College, who lived at the Botanical Gardens, Oxford, when I was an undergraduate, kept some of this terrible weed in tubs in the gardens there. These samples of his were believed to have escaped or to have been thrown into the Cherwell, and thence to have spread all over the country. In

"Flowers of the Field" Johns says it has "increased to such an extent as to impede the navigation of some of our canals." In Narford Lake it held universal sway for a long time, but of late has been dying out. At last the whole of it is dead, leaving nothing in the shape of vegetable growth in its place. The mud in the lake is sour and disagreeable. The wild fowl have gone, as it would appear from want of suitable feeding ground; while the fish have greatly deteriorated and decreased. It looks as if this weed monopolises water that suits it: that it kills off other aquatic plants with which it comes into competition; and that after a time the mud at the bottom of the water becomes so surfeited by it as to refuse to support it any longer, in spite of the water continually changing, as at Narford.

These seem to be the causes of the death of the American weed, and of the disappearance of wild fowl from Narford Lake.

South-acre, Swaffham. EDMUND THOS. DAUBENY.

[It is amusing that there should be the Oxford tradition as to *Elodea canadensis* alias *Anacharis alsinastrum*, to which Mr. Daubeny alludes, since at Cambridge the same story related of the late Professor Babington gave the plant the nick-name of *Babingtonia pestifera*. The dying-out of this dicœcious species, which has of late years been often remarked upon, raises an interesting biological question—ED. *N.N.*]

568. Bird Notes from Highgate.—I think it may probably interest readers of NATURE NOTES and bird lovers generally to know that a pair of brown owls have nested and reared three youngsters in a tree at the bottom of my garden. I think this rather remarkable, as we are barely two minutes from the railway station and less than that from the high road, where electric trams run every few minutes, and there is always a lot of ordinary traffic from very early morning to quite late at night. We have had the birds flying about the garden every evening for the last four months, sometimes quite an hour before dusk. Two or three years since it was quite the exception to hear these birds; but now there seems to be quite a number of them in the immediate neighbourhood, and it has been possible to see or hear them any evening this past summer, especially in Hampstead Lane or on the West Hill.

We have also had, these last two months, a pair of jays visit us. They come quite close to the house, generally in the early morning, and do not seem at all shy. I notice the starlings resent their presence, as each time I have seen the jays they have had one or two starlings fluttering and swearing at them. I am sorry to say a pair of carrion crows have also taken up their residence near by and have this year reared their brood. This augurs ill for the successful nesting of the smaller birds in the future, as crows are such terrible robbers of eggs and squabs. I am afraid these marauders found out the blackcap's nest which was also built at the end of the garden. I had the pleasure of seeing the cock bird every day this last spring, generally on the branch of a May tree, and listened with delight to his lovely warble; but, unfortunately, I never saw anything of his youngsters nor those of his neighbour, a whitethroat, which I hoped would be able to rear his little family in safety. The birds in suburban gardens have a terrible job to get safely through with their family troubles. We are overrun with cats which are under no control; and being so near the roads it is impossible to keep the boys from the nests. I have been amused in the early morning to watch this pair of crows stripping a cherry tree close by. It was quite funny to watch such heavy, ungainly birds trying to balance themselves on the end of a thin bough, endeavouring to get purchase enough to pull the half-ripe cherries off. (It is needless to say it was not my cherry tree they were robbing. It would probably have been quite as interesting to me if it had been, but possibly hardly so amusing). I knew these birds were fairly omnivorous, but till now had not included stolen half-ripe cherries in their dietary. Of course the local starlings and thrushes will get the blame for that!

I have seen the kestrel twice this year in Highgate, once early one morning in Southwood Lane just near the High Street. It was flying swiftly down the road about six or seven yards from the ground, and hovered for two or three seconds over the middle of the road within five yards of me, and then, with a graceful curve, slowly sailed over the roofs of the adjoining houses.

This year we have had, I think, more than the usual number of swifts. Swallows and martins seemed scarce early in the season; but they evidently had a fairly successful nesting, as they have both been very numerous lately.

32, *Wood Lane*, CHARLES S. PARSONS.
Highgate, N.

569. Swarming of Ants.—The writer of NATURE NOTES Astronomical Notes perpetuates a common fallacy in his letter under this heading on p. 196, inasmuch as the so-called "swarming" of ants is not analogous to that of bees. The latter is a true emigration; the former is not. When the inhabitants of a hive increase to such an extent that they begin to be overcrowded, a number of them, accompanied by the old (or a young) queen, go off to seek a suitable place in which to establish a fresh nest—the hive being merely an artificial nest—and this is called "swarming," which phenomenon takes place sometimes for other reasons, but this is the usual one. In the case of ants, on the other hand, the so-called "swarming" is merely the issuing forth of the males and females, which alone are winged, for the marriage flight. None of the worker ants take part in this, and it is in no sense an emigration, although many workers may be seen round and about the entrances to the nest, probably because they are unable to get in while the living stream pours forth. Numbers of ant-eating birds and other creatures are attracted to the spot, and very few of the new-born myriads can ever survive to perpetuate their species. It is not definitely known, I believe, how new colonies are founded, but it seems most likely that, as with wasps, the queen does all the preliminary work, and rears the first few workers without assistance. C. NICHOLSON, B.E.N.A.

570. "Journalistic Hypocrisy."—As a botanist, gardener, and reader of *The Country-Side*, I cannot allow the statements quoted under this heading on page 187 to pass without notice. The advertisement of British Orchids appeared only *once*, so far as I can trace, and included the following species: *Listera cordata* and *L. ovata*,* *Epipactis palustris*,* *Habenaria bifolia** and *H. viridis*,* *Aceras anthropophora*,* *Gymnadenia conopsea*, *Orchis morio** and *O. pyramidalis*,* *Ophrys aranifera*, *O. muscifera* and *O. apifera.** Now all these, except *O. aranifera* and perhaps *L. cordata* may be called common, although some are not generally distributed. The statement that "not a single British [orchid?] will live in an ordinary garden" is sheer nonsense, because *with care*, every one of the above species and most of the others can be cultivated in almost any garden that is subject to a reasonable climate, and is not in or near a large town. I may say that in addition to those marked with an asterisk, I have in my garden here *Spiranthes autumnalis*, *Orchis maculata*, *O. latifolia* *O. mascula*, *Cephalanthera grandiflora* and *Goodyera repens*, some of which have not yet flowered, but probably will next year, and the others have flowered for several years in succession, as did also *Ophrys muscifera*, *H. conopsea* and *Malaxis paludosa*, but I no longer have these three species. With the concluding sentences quoted I am, however, in perfect accord, and more especially that relating to the "advertising prowler"; for when pecuniary considerations are allied to the collection of natural objects, the extermination of the latter is immediately within sight, and the sooner the trade is overhauled and controlled, or abolished, the better. C. NICHOLSON, B.E.N.A.

571. Scottish Mountain Trees.—The appended list is the outcome of observations made chiefly in the Braemar district, and may be of value as giving the species of forest trees found growing at an elevation of 1,100 feet and upwards above sea-level. This height is named, not because any scientific importance attaches to it, but because it covers the village of Braemar (alt. 1,100 feet), which is taken as a base-level, and also Tomintoul, Banffshire (alt. 1,160) where some observations were made for me by Miss J. G. Watt.

The two places above-named are the most elevated villages in the great mass of hill country known as the Cairngorm mountains, forming the north-east termination of the Grampians. Around the far-circling flanks of the Cairngorms, both on the Dee and the Spey watersheds, is to be seen the finest wild forest scenery in the country, in respect both of extent and of natural features. From some points of view on Speyside (Boat-of-Garten and Aviemore, for instance), the prospect is a grand and memorable one. The River Spey is at our feet;

across it are the massed and serried ranks of the pine trees of the forests of Abernethy and Rothiemurchus, extending for miles up and down the valley, and stretching up the hill sides, which culminate in the principal summits of the Cairngorms. This great background, far in the distance, dwarfs by its size and remoteness the woodlands at its base. They seem in proportion only dense plantations, such as occur on many hill-sides, and it is not until the forests are visited and passed through that their extent and area is properly appreciated.

At about the height of 1,500 feet above sea-level, the Abernethy and Rothiemurchus Scots pines die out, but in some Deeside glens the pines run to a considerably greater height, as noted in my list. It may, however, be accurately said that the limit of forest growth is reached at from 1,500 to 1,700 feet, and the list shows that but few species attain even this height. In exceptional situations or circumstances individual trees of the mountain-ash, birch, Scots pine, spruce fir and larch, occur at higher levels, but the highest common levels are those noted underneath.

LIST OF SPECIES OF FOREST TREES OCCURRING UPWARDS OF 1,100 FEET ABOVE SEA-LEVEL.

Lime	*Tilia europæa*	1,100–1,200 feet.
Great Maple	*Acer Pseudoplatanus*	,, ,, ,,
Laburnum	*Cytisus Laburnum*	,, ,, ,,
Scotch Laburnum	*C. alpinum*	... 1,200 ,,
Horse Chestnut	*Æsculus Hippocastanum*	... ,, ,,
Wild Cherry	*Prunus Avium*	1,100–1,200 ,,
Bird Cherry	*P. Padus*	1,300–1,400 ,,
Whitebeam	*Pyrus Aria*	1,200–1,300 ,,
Mountain Ash (Rowan)	*P. Aucuparia*	... 2,000 ,,
Hawthorn	*Cratægus Oxyacantha*	... 1,100 ,,
Ash	*Fraxinus excelsior*	1,100–1,200 ,,
Elm	*Ulmus montana*	,, ,, ,,
Birch	*Betula alba*	1,800–2,000 ,,
Hazel	*Corylus Avellana*	1,100–1,200 ,,
Alder	*Alnus glutinosa*	... 1,500 ,,
Oak	*Quercus Robur*	... 1,200 ,,
Beech	*Fagus sylvatica*	... 1,100 ,,
Willows	*Salix* (two species at least)	1,100–1,200 ,,
White Poplar	*Populus alba*	... 1,200 ,,
Aspen	*P. tremula*	... 1,500 ,,
Spruce Fir	*Picea excelsa*	... 2,000 ,,
Larch	*Larix europæa*	... 2,000 ,,
Abies hookeriana (bearing many cones in July, 1903)		... 1,200 ,,
Scots Pine	*Pinus sylvestris*	2,000–2,100 ,,

Of the twenty-five species named the birch and the Scots pine far exceed all the others put together, in number, and at the higher levels the last-named species is the predominant one. Considerable numbers of fairly well-grown pines run up to over 2,000 feet in Glens Quoich and Derry (Forest of Mar), and with them are some spruces and larches. The larch is numerous in other places. At and above the village of Braemar is a very lovely and typical birch wood, many of the houses being built in clearings in this wood. By the side of the River Dee the birches are tall, and many of them are above the average size; but when 1,500 feet up is reached they have become beautifully small and well-proportioned. There are thousands not over six feet in height. They ascend the slopes of Morrone in almost unbroken numbers to about 1,700 feet, sweeping over its northern side. It is a characteristic Highland native wood, with an undergrowth of heather, juniper and bracken. Amongst the birches are occasional aspens, bird-cherry, and Scots pine.

Of the other species in the list, solitary examples of the mountain-ash occur in more than one place at 2,000 feet, and at lower levels it abounds. The alder is by all the stream sides; but the hazel is scarce. Only one small oak was noted: it is not till the 700-800 feet level is reached that oaks become prominent. In the neighbourhood of man's dwellings specimens of the other trees named above may

be found, flourishing and well-grown in many cases, but not in any considerable numbers. Right in the village of Braemar a dark copper beech is a conspicuous object.

Of the earlier woodlands of the Cairngorm mountains evidence may be seen in the tree remains found in peat-mosses and on the bare hill-sides at an elevation where trees do not now seem able to maintain existence. Burnt wood frequently occurs underneath moss and tree-roots, and bears witness to the primitive and wasteful methods by which the earlier inhabitants cleared the land. The course of time has brought about the present-day demands for re-afforestation, but "that is another story."

October 10, 1907. HUGH BOYD WATT.

572. Catalpa.—The fine Catalpa in New College Gardens, Oxford, was in full bloom on September 23, though some of the blossoms were beginning to fade. Has your correspondent noted the two large Catalpas on the Westminster Embankment? Could you help towards a concerted movement amongst local authorities for the planting of more trees like the Catalpa and Ailanthus, which do so well in London? C. H. G.

573. Convolvulus.—I have noticed very much this month the exceptional beauty of *Convolvulus major*, both in size and colour. Some growing in this immediate neighbourhood over high hedges, which in previous years have been pure white, this month are of a most exquisite colour, either a pure mauve, or of mauve and pink combined, and all of unusual size. This must be one of the effects of this exceptionally beautiful and hot September.

5, *Fallester Road, Bath*, HARRIET G. OLIVE.
September 28.

574. Late Appearances.—The abnormal warmth of September may account for the appearance of the early summer and spring flowers in the country at the present time. I gathered on October 13, at Hurstpierpoint, Sussex, a dog violet and a ripe wood strawberry (both in perfect condition) and on the same country walk found Herb Robert, Horehound, Nettle-leaved Bell-flower, Agrimony, *Erodium*, Field Scabious, and St. John's Wort. Covering a stream near Goodwood, West Sussex, on September 20, I observed both kinds of water Ranunculus, *aquatilis* and *hederaceus*. A thrush's egg was found in a garden in the same locality, whilst the Blackbird's note was heard early morning and evening about the same date, giving quite the illusion of spring, which was added to by the appearance in the garden of a brimstone butterfly. I never remember seeing one so late in the season before.

9, *Park Crescent, Brighton*. E. M. NICHOLSON.
October 14.

NATURAL HISTORY QUERIES.

134. Parasitic Plant Growing on Caterpillar.—I have had a very curious specimen brought to me from New Zealand, a dried caterpillar about 2½ inches long with a dried plant, 6 inches long, growing from its head. The donor, who is no naturalist, can only tell me that it is a well-known phenomenon in New Zealand, the seed taking root in the caterpillar, and feeding upon it till the latter dies. I am anxious to know a few more particulars:—Whether only a certain variety of plant can grow thus, and if only on certain species of caterpillars, and the names of both, and also whether the seed falls on to the caterpillar or is eaten by it. I am told these specimens are not very common now. They are generally brought in by the Maoris.

Llanbedr, Vale of Conway. ANGELA BRAZIL.

[The "Vegetable Caterpillar" has long been known, though we are still in want of a certain identification of the moth or moths to which the caterpillar belongs. It was formerly erroneously referred to *Œnetus* (*Hepialus*) *virescens*; but the larva of that species is not subterranean as is the caterpillar in question. It has more recently been referred to *Porina Mairi*; but as this is a species the only known specimen of which has been destroyed, it is an unlikely source for so common an object. More probably the caterpillars—or some of them—are

those of *Elkamma fuscomaculata*. Allied British insects are similarly, though less strikingly, affected, and among Australian and Tasmanian insects there are several cases even larger and more striking than that from New Zealand. The parasitic plant, in the case of the latter, is the Sphæriaceous fungus *Cordyceps Robertsii*, and its spore certainly germinates in the living body of the larva. A not dissimilar case can commonly be observed in our common house-flies at this season of the year; but New Zealand naturalists might well give us some further particulars.—ED. *N.N.*].

ASTRONOMICAL NOTES FOR NOVEMBER.

Mercury will be a morning star at the end of the month. He may be seen as a dark object in transit across the disc of the sun on the 14th from 10.24 a.m. to 1.50 p.m.

Venus will be visible for a short time after sunset at the close of the month.

Mars may be seen as a red evening star; near the moon on the 12th. The planet will be situated in Capricornus, and about 1 degree north of the star Delta Capricorni on the 17th.

Jupiter rises at 9.50 p.m. on the 15th, and will be visible all night afterwards. Near moon on the 25th and 26th. His position is on the eastern borders of Cancer and about 15 degrees west-north-west of the bright star Regulus in Leo.

Saturn will be an evening star. Near moon on the 14th. He may be found 33 degrees above the horizon in due south at 8 p.m. at the middle of the month.

Shooting Stars, directed from the constellation Leo, are likely to be abundant on the mornings of the 15th and 16th after moonset.

W. F. D.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members stand for election. *Central:* J. S. Aikman, Esq.; C. Stonham, Esq., C.M.G.

Ealing Branch.—Miss L. Amherst; George Arthur, Esq., M.B.; W. G. Banfield, Esq.; Mrs. Banfield; Ernest J. Beard, Esq.; Edward C. Clifford, Esq., R.I.; R. P. Cockburn, Esq.; Capt. R. Ford, R.N.; Aug. de Frey, Esq.; Alexander Hubbard, Esq.; Mrs. J. E. Eyton Jones; Henry Cadwaladr Jones, Esq.; E. W. M. Meeres, Esq.; Miss S. S. Myers; Thomas Nicholson, Esq.; William Edwards Parry, Esq.; Charles L. Scholefield, Esq.; Arthur Stephens, Esq.; Mrs. C. A. Thompson; G. P. Bowling Trevanion, Esq.; G. Seymour Valentin, Esq.; Watkin Watkins, Esq.; William Henry Whiting, Esq.; Sidney E. Williams, Esq.; William T. Yeames, Esq., R.A.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of November 18 and December 16, for the purpose of issuing books to members.

EXCURSIONS.

Saturday, September 14.—Favoured by pleasant weather, twelve members of the Selborne Society and a junior took part in the old favourite ramble, from Bickley Station to Roundabout Woods, Bickley Woods, Pett's Wood, Pauls Cray Common and back to Bickley Station, *via* Chislehurst. This walk claims to give nature-lovers four hours uninterrupted recreation and respite from any noisome traffic, motor cars and the like, and on that afternoon again fully justified its claim. A few minutes after leaving the station a footpath was taken, which later crossed the golf links, and from thence onward skirted and went through woods right to the end. The beautiful autumn tints of the trees and bracken, and the calm repose of the countryside, were thoroughly enjoyed by all. As usual, tea was partaken of in Mr. Dabner's garden on Pauls Cray Common, and after a vote of thanks to Mr. Mühlberg the party reached Bickley Station again as early as 7 o'clock.

Saturday, September 28.—A party of eleven arrived at Wrotham Station at 2.35, with Mr. Kenneth W. Mumford as guide. The first section seen was that in the sand pit just opposite the main entrance to the station, and consisted of a drift deposit of sand, resting on the north flank of a slope of the Folkestone Beds. The first point noticed was the great amount of denudation that had taken place to form the Chalk escarpment, then plainly seen about two miles away in a northern direction. The causes of that immense denudation could not, the guide said, have been of any ordinary simple nature. This Plateau Drift is now only found in small isolated patches in different parts of Kent, Surrey and Sussex, but must once have been a very widely distributed one which had vanished with the departure of the crest of the Wealdom dome. The guide then led the way to the celebrated ossiferous fissures in the valley of the Shode, which have furnished us with more material for the reconstruction of the history of our island during the Tertiary Period than any other caves or fissures in the world. The theory Mr. Mumford advanced to account for the present condition of these faults was that a great downthrow has occurred approximately from Plaxtolin in a north-west direction to Holy Hill, amounting at that village to over five hundred feet. To this depression the clays lent themselves by forward progression at right angles to the line of depression, by which the outcrop of the Gault in the area under consideration is nearly doubled; the limestones of the Hythe beds, being unable to bend, naturally fissured, so that we have a district permeated with cracks of all sizes at right angles to the line of the downthrow. Some of these fissures become filled with surface-derived material, and thus remain without a sign of a fossil, and others remaining quite empty until a stream of later date being situated in a favourable position, as the Shode was, the waters gaining free access to them, carry into them their usual burdens and there deposit them. Sometimes the height to which the fissure material rises in the fissure, marks the height to which the flood was able to carry its burdens, and in the subsequent ages the meteoric waters gaining an access to these chambers, carried with them the lime dissolved from the limestones above and re-deposited it in the upper part of the partially filled fissure, until later it became solidified and at last received the final sealing down of stalagmite, which protected the bones below from further attack.

Ten fissures are now seen, one only yielding bones. Very interesting it is to take out the femur of the Arctic Fox (*Canis lagopus*). The nearest country to Britain where this animal now lives is Iceland. The remains of the Spotted Hyæna have also been taken from the same fissure and also the Alpine snow vole, this latter animal helping to prove, as it does, the moderation of the so called Glacial Period in the south of Britain.*

Reverting to the River Shode itself, the guide pointed out that it now rises about one and a half miles above Ightham, whereas in earlier times it has in succession used two other beds now dry, the steeper one of the two now forming a roadway from Boro' Green to Plaxtol. It was while using this bed that the river Shode washed the valuable remains of our Tertiary mammals into the fissures. The party then walked round the original bed of the river, which bed was originally a fissure, thus attracting the earliest waters of the stream by offering a ready-made bed. We may imagine how swift was that river when rushing through a ready-made bed in the hard sandstone. This accounts for the steep incline the eleven Selbornians had to climb when mounting the south bank of the Shode Valley, a climb of quite 80 feet, the view from this river bank being all that could be desired. The party arrived at the Oldbury Rock-Shelters, where Mr. Harrison was awaiting their arrival, at about 4.30. These dwellings of Palæolithic man are the best example of their kind to be found to-day in the south-east of England, being natural caves once tenanted by our earliest forefathers. These earliest primitive men had to contend with the Mammoth, Woolly Rhinoceros, Cave Lion, and many other ferocious mammals. The tools of this palæolithic race are found in the vicinity of Oldbury Hill, and thus give rise to the name of "Cæsar's Camp," so common a name for such places in our country villages. Tea was partaken of at the "George and

* See a paper in the Proceedings of the Geologists' Association, 1907, by Mr. Martin A. C. Hinton, "Microtus nivalis in Pleistocene times."

THE REMAINS OF A ROCK-SHELTER AT OLDBURY CAMP.
From "Ightham, the Story of a Kentish Village" (by kind permission of the Homeland Association.

Dragon" at 5.30 p.m., after which the village church was visited. The oldest part is the east chancel wall, which is early twelfth century. The window on the south wall contains some pieces of glass showing Henry VII. and his Queen, which came from the Mote, Ightham. On the south of the chancel is a fine alabaster tomb, with two effigies in recumbent positions, to the memory of members of the Selby family, once of the Mote. On the eastern chancel wall is a large monument to Dame Selby, who is said to have revealed the gunpowder plot to Lord Monteagle. The illustration of the Oldbury Rock-Shelters, showing the natural washing away, is here reproduced by kind permission of The Homeland Association, from their admirable publication :—"Ightham, the Story of a Kentish Village," by Mr. F. J. Bennett, F.G.S.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Monday, November 18.—General Purposes Committee at 5.30 p.m.

Tuesday, November 26.—Council Meeting at 5.30. p.m.

FUNGUS FORAY.—The Annual Fungus Foray of the Essex Field Club, in which Members of the Selborne Society are permitted to take part, will be held at Oak Hill Farm, Theydon Bois, on Saturday, November 2. The first collecting party will leave Loughton Station at 10.50 a.m. (on arrival of the 10 o'clock train from Liverpool Street). Afternoon visitors should take train direct to Theydon Bois. Trains from Liverpool Street 12.24, 1.35, and 2.8; from Fenchurch Street, 12.28, 1.8, and 2.12. Tea, at Oak Hill Farm, about a mile from Theydon Station, at 5 p.m. Fare, 1s. 4d. return; tea and expenses, 2s. 6d.

Saturday, November 23.—British Museum (Natural History), Cromwell Road, South Kensington. Assemble in the Central Hall at 2.30 p.m. Dr. A. B. Rendle has kindly consented to give a demonstration of the special exhibits of memorials of Linnæus.

All communications respecting Excursions should be addressed to Mr. H. H. POOLE, *Hon. Excursion Secretary*, at 16, Heathcote Street, W.C.

ANSWERS TO CORRESPONDENTS.

Eldon Pratt.—The birds described seem to have been Blackbirds in immature plumage. Though there is no *à priori* impossibility about a cross between the Blackbird and another species of Thrush, such a thing does not seem to have been actually recorded.

W. O. Stapledon.—Were not the two birds two hen Blackbirds, or male and female in immature plumage?

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

A SUPPLEMENT TO THE

'BIRDS OF NEW ZEALAND.'

By the late SIR WALTER L. BULLER, K.C.M.G., F.R.S.

Vol. I. of the "Supplement" embraces 250 pages of Imperial quarto, and contains, besides a steel-engraved frontispiece, five hand-coloured plates and forty text illustrations.

Vol. II. contains seven hand-coloured plates (making twelve in all), with numerous text illustrations.

The price to subscribers is Three Guineas per volume; and the edition is limited to 500 copies.

A Prospectus may be obtained on application to

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.

In medium 8vo, tastefully printed, suitably bound, and illustrated, 6s. net.

GLEANINGS AFTER TIME:

Chapters in Social and Domestic History. Edited by G. L. APPERSON, I.S.O., Author of "An Idler's Calendar," "Bygone London Life," &c. With forty-one Illustrations.

In this volume regard has been had to the human and domestic side of social history in this country and in America. The papers are arranged in a roughly chronological order, and have been chosen as throwing light on various aspects of that social and domestic life of the past—aside of archæological study and research which has always possessed a great fascination for the general reader of the outer circle as well as for the professed antiquary.

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

PROFESSOR BOULGER, F.L.S., F.G.S.

(Editor of "NATURE NOTES"),

Is prepared to deliver Lectures (Singly or in Courses, with or without Lantern Slides), to Schools, Natural History Societies, &c., on Geology, Botany, or General Natural History.

For Terms, Dates, and Tours, address G. S. BOULGER, Richmond, Surrey.

To Subscribers, 7s. 6d. per annum, Post Free.

The Annals of Scottish Natural History,

A QUARTERLY MAGAZINE.

EDITED BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S., Member of the British Ornithologists' Union;
JAMES W. H. TRAIL, M.A., M.D., F.R.S., F.L.S., Professor of Botany in the University of Aberdeen;
WM. EAGLE CLARKE, F.L.S., &c., Natural History Department, Museum of Science and Art, Edinburgh.

THIS MAGAZINE—a continuation of "The Scottish Naturalist," founded in 1871—is entirely devoted to the publication of Original Matter relating to the Natural History of Scotland, and includes Papers contributing to the elucidation of the Fauna and Flora recent and fossil, Observations on Life Histories, etc., and Notes recording the occurrence of uncommon species and other useful and interesting facts.

EDINBURGH: DAVID DOUGLAS, 10, CASTLE STREET.

Crown 8vo, cloth lettered. Price 2/- net, post free.

PROCEEDINGS OF THE CONFERENCE

ON

The Teaching of Hygiene and Temperance in the Universities and Schools of the British Empire.

HELD AT THE

EXAMINATION HALL, VICTORIA EMBANKMENT, LONDON, S.W.

Chairmen:—LORD STRATHCONA, G.C.M.G.
SIR JOHN COCKBURN, K.C.M.G.
SIR JOHN GORST, F.R.S., K.C., M.P.

JOHN BALE, SONS & DANIELSSON, Ltd.
Oxford House, 83-91, Gt. Titchfield St., Oxford St., London, W.

4to. Beautifully illustrated with 38 full-page Plates and a 5-figure 15-inch coloured Manikin and Key showing all the organs of the body.
Price **12,6** net.

By Eugen Sandow.

Construction and Re-Construction of the Human Body,

Being a descriptive account of his System of Cure by Physical Exercises, with an Introduction

By Dr. Sir A. Conan Doyle.

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Gt. Titchfield Street, W.
And at All Booksellers and Libraries.

lo. 216. Vol. XVIII. December, 1907.

Nature Notes

THE MAGAZINE OF

THE SELBORNE SOCIETY,

With which is incorporated "The Field Club."

EDITED BY

G. S. BOULGER, F.L.S., F.G.S.

Honorary Professor of Natural History in the Royal Agricultural College, and Lecturer on Botany and Geology in the City of London College.

CONTENTS.

PAGE

BUSH EPISODE 221

ELBORNIANA 222

STRONOMICAL NOTES FOR DECEMBER, 1907 223

ATURAL HISTORY NOTES.—Prehistoric Grave in a Churchyard.—Birds in Normandy. — Cuckoo. — Undesirable Aliens. — An Experiment Worth Trying.—Ant Colonies.—Swarming of Ants.—Late Appearances.—Convolvulus 223

ATURAL HISTORY QUERIES.—Snakes.—Flight.—Pond Life 226

EVIEWS AND EXCHANGES 226

ELBORNE SOCIETY NOTICES 231

NSWERS TO CORRESPONDENTS 232

ONDON—JOHN BALE, SONS & DANIELSSON, Ltd., Great Titchfield St., W.

CITY AGENT—ELLIOT STOCK, 62, Paternoster Row, E.C.

PRICE 2d.

NOW READY

THIS SPLENDID VOLUME WILL APPEAL TO ALL LOVERS OF NATURE, BOTH ON ACCOUNT OF THE NUMBER AND BEAUTY OF THE ILLUSTRATIONS AND THE ACCURACY AND FASCINATION OF THE MATTER.

Trees and Their Life Histories

By PERCY GROOM, M.A., D.Sc., F.L.S.

With **112** *full page and about* **400** *other Illustrations from original photographs by Henry Irving.*

¶ A volume of special interest to nature lovers. It contains descriptions, analytical tables, and other matter invaluable to the tudent, while the introductory portion gives the necessary information to adapt it for use by readers unacquainted with botany.

Price 25s. net.

READY DECEMBER 13

FOR LOVERS OF BIRDS AND NATURE

Birds of the Loch and Mountain

By SETON P. GORDON, F.Z.S., M.B.O.U.

With 91 Illustrations from Photographs taken direct from Nature by the Author.

¶ Wild Birds in their nests in rocky fastnesses and on bleak moor, in their various stages of growth, their eggs, young, &c., are depicted in a series of remarkably beautiful and striking photographs. Their habits and lives are described by pen-pictures giving a complete and interesting account which will charm every reader. The work throws much new light on the habits of some of the wariest birds of Loch and Mountain and of the dangers surmounted by the author in his successful efforts to secure photographs.

Price 7s. 6d. net.

Cassell & Co., Ltd., La Belle Sauvage, E.C.

ALL RIGHTS RESERVED

Nature Notes:

THE SELBORNE SOCIETY'S MAGAZINE.

No. 216. DECEMBER, 1907. VOL. XVIII.

A BUSH EPISODE.

IT was after midday when friend Macdougall and myself halted for rest and refreshment at a little wooden bridge over a wayside creek. The day was sultry, 100° F. in the shade, in the bush of Eastern Gippsland; the vertical sun burned us, and no breath of wind stirred among the tall, almost shadeless, gum-trees. The only bit of coolness was suggested by a patch of shade under the bridge itself, and thither we retired, to stretch ourselves among some green ferns which there found roothold, and to discuss a *dry* lunch; for what should have been a running creek was only a waterless hollow, the moister appearance of the bed when compared with the soil around indicating that desiccation had only recently taken place. Presently, hearing a rustling of dry fronds, we looked towards the top of the opposite bank, and saw there in full view the head and shoulders of an Iguana, or Lace-lizard (*Monitor*), the body and tail being concealed among the fern. At the same moment he detected us, and instantly became motionless, his head, viewed from the profile, being not unlike that of a small crocodile, the eye having the same "dead" appearance as in that reptile. My chum tossed a piece of cheese half-way up the bank, to see if the animal would scent it and work down the bank. We watched silently for some time, and at length noticed that he was moving invisibly—that is, he was lower down by an inch or two than at first, although the movement was so stealthy and noiseless that the eye could not detect it. Soon a small Bush-Tit (*Sericornis*) spotted the enemy, and rushed recklessly into danger, perching on a twig within a foot of the reptile's head, and making therefrom a great outcry—but his clan gathered not, as usual, to the battle-cry; probably they were taking, in some sheltered spot, a siesta in the noontide heat.

A little brown lizard crept out of the green tangle, and came forward into the dry creek-bed, a bright-eyed, confident little

fellow, contrasting strangely with his stealthy, assassin-like relative a few yards higher up the bank. We tossed a tiny slice of cheese into the hollow. Soon the lizard came up, approved, took the fragment into his mouth and began munching with great appreciation. Very comical he looked, glancing up at us with bright eyes, with a little of the cheese projecting on each side of his smooth brown head. Soon he was joined by another, to whom a fragment of peach was thrown, which was taken charge of with as much evidence of appreciation as was the cheese. Leaving these friendly little fellows, we explored down the creek for some distance, and by-and-by came upon a hole of muddy water which had survived the rainless period. Around it grew plants of the straggling "Brook-lime" (*Cratiola peruviana*), with opposite leaves and small pinkish flowers, the stem and leaves most bitter when chewed; above us were long-leaved Acacias, and above these again the tall Eucalyptus, their leaves hanging vertically in the sultry air. As I went a little lower down the creek-bed, a big Iguana sprang off a heap of dry rubbish on which he had been reposing and made a bee-line for the nearest gum-tree, up which he went at the double, sticking his sharp talons into the bark while working his long head from side to side and growling savagely at the intruder on his peace.

Melbourne, Victoria,
March 6, 1907.

H. STUART DOVE.

SELBORNIANA.

DEATH OF Mrs. TURLE.—We much regret to hear of the death of Mrs. Turle, an old friend and member of the Selborne Society and a frequent contributor to our pages. Mrs. Turle was the daughter of the well-known naturalist the Rev. F. O. Morris, and the widow of the late Rev. W. H. Turle, and died at St. Albans, which had been her home for some years.

ILLNESS OF Mrs. PERCY MYLES.—All Selbornians will hear with regret that Mrs. Percy Myles has been compelled to submit to a serious surgical operation. She is at present in Fitzroy House, Fitzroy Square, and we are glad to say is making satisfactory progress.

SWINEY LECTURES.—A course of twelve lectures (to which admission is free) on "Horses: Past and Present," will be given by Professor J. Cossar Ewart at the Victoria and Albert Museum, South Kensington, on Fridays, Saturdays, and Mondays in December, commencing on Friday, December 6, at 5 p.m.

ASTRONOMICAL NOTES FOR DECEMBER.

Mercury will be visible about an hour before sunrise during the first week of the month.

Venus may be brilliantly observed as an evening star in W.S.W. At the end of the year she sets two hours after the sun. Near moon on the 6th, and 1 degree south of Uranus on the 12th.

Mars sets at 10.43 p.m., and will continue to be rather conspicuous as an evening star. He may be seen 2 degrees north of Saturn, on the last day of the year.

Jupiter rises on the 1st at 8.50 p.m., and on the 31st at 6.45 p.m., and will be seen during the whole night afterwards. Near moon on the 23rd. The planet is situated 15 degrees west of the bright star Regulus in Leo, and 5 degrees east of the star cluster Praesepe in Cancer.

Saturn is perceptible in the evenings, setting on the 1st at 12.30 a.m., and on the 31st at 10.33 p m. Near moon on the 11th and 12th, and very near Mars on the 31st.

Shooting Stars will be numerous on the nights of the 10th to the 13th.

Neptune will be hidden by the moon on December 21, 5.20 to 5.29 a.m., but the event can only be observed through a good telescope, as the moon will be nearly full. W. F. D.

NATURAL HISTORY NOTES.

575. Prehistoric Grave in a Churchyard.—While digging a grave in the churchyard of Llanbedr, Vale of Conway, the sexton struck a flat slab of stone, 6 feet below the surface, under which he noticed a skeleton in a crouching position, surrounded by boars' tusks. Unfortunately, not realising the significance of his find, he covered it up again without showing it to anyone who would have been able to make an intelligent investigation. I have been able to secure a few of the tusks and to ascertain that the body seemed to be in a kneeling posture, but cannot discover whether there were any pieces of pottery. The site of the grave is a distinct mound which may well have been an old tumulus.

Llanbedr, ANGELA BRAZIL.
Vale of Conway.

576. Birds in Normandy.—Having recently spent a short holiday in Normandy, I am tempted to add a few notes to Mr. Johnson's very interesting article in the September number. I noticed fewer species than would have been the case in England, but some birds appeared to be much more common than they are in this country. As might be expected in a country where there is very little game preservation, rapacious birds were more abundant, though hawks were not in evidence. However, I met with one pair of buzzards, and kestrels were plentiful in the cliffs bordering the Seine. Red-backed shrikes were frequently to be seen perched upon the telegraph wires, while magpies, of course, were never long out of sight. I noticed but very few rooks, their place being occupied by carrion crows. Green woodpeckers were plentiful, and more easily observed than is the case in England. On several occasions I noticed them running up the bark of the trees which border the main roads. Jays were seen occasionally, lapwings once, and partridges not at all. I also noticed the extreme paucity of the thrush family, referred to by Mr. Johnson.

Of birds which would not have been seen in England I can only record three hoopoes upon the same afternoon, although the district must remain a profound secret.

With regard to plants, my chief impression was the extraordinary profusion of certain species in certain places. Near St. Martin de Boscherville, the fields were blazing with poppies or blue with the corn bluebottle, while the steep hillsides were carpeted with the Viper's bugloss in full flower. The musk mallow was far more plentiful than it is in England, and I gathered some curious orchids of several species, of the identity of which I am still in doubt. The commonest

butterfly appeared to be the Marbled White, which took the place of the other "whites" of this country. On the borders of the woods I also noticed the White Admiral and some large Fritillaries. On the whole, Normandy is by no means deficient in wild life, and it is very interesting to notice the small differences between its flora and fauna and those of this country.

5, *Romola Road, Herne Hill, S.E.* W. COCKSEDGE.

577. Cuckoo.—The form "cucu" would not have been agreeable with the genius of the Latin language. There are, certainly, a few words ending in u, but they are probably adopted forms, as genu, the Greek γονυ; and in this case "genus" and "genum" also occur as nominatives. Cuculus contains the birds' note better than cucus, but may, perhaps, have been originally the diminutive of cucus. More probably the "lus" has only terminal value. The quantity of the second u in cuculus is variable. Horace makes it long:—

"cui sæpe viator
Cessisset, magna compèllans voce cuculum,
Sat. 1.7.31." J. L. OTTER.

578. Undesirable Aliens.—The introduction into the British Isles of that well-known pest the "American Weed" some fifty years ago, reference to which was made in No. 567, is one of many instances of the danger of importing strange plants into a part of the world remote from their original home. This remark applies to animals as well. Darwin tells us that "the endemic productions of New Zealand are rapidly yielding before the advancing legions of plants and animals introduced from Europe." In the Antipodes our wild rose grows to an enormous size and becomes a serious hindrance to cultivation. Scotch thistles that were unknown there one hundred years ago monopolise vast tracts and kill off the native plants with which they come in competition. Many an Australian has cursed the day that first saw our wild rabbit in his continent. When the English starling was introduced there, stringent laws were passed for its protection. But change of country has caused change of habit, and one of our most useful birds here has become a pest out there. The evil doings of the British sparrow in many foreign parts are well known. The introduction of a fresh race of man is in many cases disastrous and fatal to the aborigine, as the North American Indians, the Maori, and the Australian black found out long ago. The detestable brown rat is not of English origin but an importation from abroad.

Scientists and faddists, too, should think twice before they turn loose new forms, animate or inanimate, on our shores, for some fresh animal or plant may do great dis-service and cause far-reaching injury.

South-Acre, Swaffham. EDMUND THOS. DAUBENY.

579. An Experiment worth Trying.—For this all that is required is a medium-sized flower-pot and some finely coloured autumn leaves of almost any kind, those of the vine, bramble, common maple, ivy, wild guelder rose, *Viburnum Opulus*, and *Rhus Cotinus* being as suitable as any.

Place a leaf in the bottom of the flower-pot so as to cover the drainage hole. Take the pot by the rim, and hold it with the small end pointing in the direction of the lamp, *but below it*, so that in looking into it nothing whatever is discernible but impenetrable darkness, as of a thick, murky night. Raise it very slowly and steadily (the slower the better) up towards the lamp or other source of light, of which there must be only one in the room. Presently a faint glimmer appears, like the moon's rays trying to penetrate a dark cloud. Gradually the light grows stronger and vague suggestions of luminous colour of exceeding beauty begin to pierce the prevailing gloom, but as yet all is indefinite and mysterious—a subdued glory foreshadowing something yet more lovely. As the flower-pot in its gradual ascent comes almost up to the light the full splendour of colour bursts into sight in its wondrous intensity. Surrounded by profound darkness, a most brilliant yet soft and tender radiance is seen, the colouring of which is beyond description. The veining of the leaf, even in its most minute ramifications, is as clearly brought out as the delicate tracery of elm twigs when seen in contact with the moon's disc in winter. By trying different leaves a great variety of effects can be obtained. Much may be done by using two leaves and allowing

one of them partly to overlap the other, so that the greater part of the illumined space is occupied by a sort of half light,* allowing only a small speck of the highest degree of brilliance to be seen.

The exquisite beauty of autumn leaves revealed in this manner will, I believe, be a surprise to many, and those who think it worth while to follow carefully the very simple directions given above will, I think, agree that the experiment is worth trying.

Blaxhall, Suffolk. G. T. ROPE.

580. Ant Colonies.—In No. 569 Mr. Daubeny raises the question of the founding of ant colonies. It most certainly is a very perplexing problem and one which deserves the attention of the best observers.

There are three general methods of founding a colony: (1) A young queen may join an already formed nest; or (2) may collect a few workers and start a new nest; or (3) may found a nest by herself.

By actual experiment all three modes are possible, but as far as actual observations, out-of-doors, are concerned I should give the palm to No. 2. Many a time I have watched young queens in September wandering about, with or without their wings, until they happen to meet a stray worker of the same species, who immediately runs off for two or three of his friends, and on their return—after a great deal of fuss and excitement—a move is made to find a suitable locality for the new nest.

It would give me great pleasure to hear from any of the members who are interested in this question.

16, *Manor Drive*, O. C. SILVERLOCK.
Halifax, Yorks.

581. Swarming of Ants.—Mr. C. Nicholson has fallen into an error as to the meaning of my remarks on the above subject. The most superficial observer could scarcely suppose that ants swarm after the same manner as bees. The word "swarming" as employed by me was merely intended to apply to the great number and activity of the ants outside of the nest, both of the winged and wingless members of the community, on the days selected for flight by the former.

I have not always recorded the particular dates on which the swarming or flight of ants occurred in recent years, but the following is a short, imperfect list:—

1889, July 29.
1890, August 18.
1892, August 16 and 17.
1895, August 15.
1901, August 9.
1902, August 15.
1903, August 8.
1906, August 6 and 7.
1907, August 28.

W. F. D.

582. Late Appearances.—The appearance of the Brimstone Butterfly in late September (p. 216), while noteworthy, is not, I think, very unusual, seeing that this butterfly, in common with some others, passes the winter in the perfect state. It emerges from the chrysalis in late July, and may live until the following June, so that a mild spell of weather at any time between those dates is liable to be brightened by its temporary appearance from its place of hibernation.

Hale End, Chingford. C. NICHOLSON, B.E.N.A.

583. Convolvulus.—Has not Harriet G. Olive made a slip in calling the plants referred to on p. 216 *Convolvulus major*, which is not a British wild plant, nor is it a perennial. The plant she means is undoubtedly *Convolvulus sepium* (Great Bindweed), although I cannot call to mind ever seeing any previous record of its flowers being anything but pure white. The plant incorrectly called *Convolvulus major* by florists and others is an annual from Tropical America and its proper name is *Ipomœa purpurea*.

Hale End, Chingford. C. NICHOLSON.

* Occasioned by the rays passing through a double thickness of leaf.

NATURAL HISTORY QUERIES.

135. Snakes.—I have had three young snakes brought to me about 4 inches in length and the thickness of a slate pencil. I am anxious to keep them under observation, and have placed them in a reversed bell-glass with soil and moss at the bottom.

I should be glad of some information on the subject of how to feed them. Will they hibernate all winter? And how long will they take to attain full growth? I believe them to be specimens of the common grass snake.

Llanbedr, Vale of Conway. ANGELA BRAZIL.

[Young grass-snakes are hatched in late summer or in the autumn. They seem to live at first upon soft insects and worms; but when a few weeks old can take baby frogs. The food of the adult is frogs, fish, newts and occasionally toads. They require to drink much and often, and will sometimes drink milk. When young they are easily drowned, even in a shallow tank. They hibernate in the ground until the end of March, pair in May or June, and lay their eggs in manure-heaps in July and August. They are readily tamed and continue to increase in length for some years.—ED. *N.N.*]

136. Flight.—Mr. John Watson, in his book "Woodland and Field Folk," states (p. 215) that a race of 3 miles took place between pigeons and bees, and that the first bee came in a quarter of a minute before the first pigeon.

Can you do me the favour to explain how this could be, as a bee is a heavy insect with short wings?

Southtown House,
Kenton, near Exeter,
October 17, 1907. GEORGE H. COURTENY.

137. Pond Life.—I have a small pond fed entirely by surface water from the road; the bottom concreted, the top usually covered with duckweed. The only animated creatures that I know of in it are newts and waterman-beetles, &c.; there are no fish, nor, as I believe, are there any rats or water-voles. But we often notice, as on November 1, a number of tracks across the surface through the duckweed, I think certainly too narrow for rats. I think they are always (so far as we can see) made by night, and, I should say, by some creatures swimming on the surface. This is not, I suppose, a usual habit of newts. My man has suggested water snakes; but I hardly think they would leave straight, narrow tracks such as these. Water shrews seem to me more likely, but I should be glad to hear the opinion of someone better informed.

Otham Parsonage, Maidstone,
November 2, 1907. F. M. MILLARD.

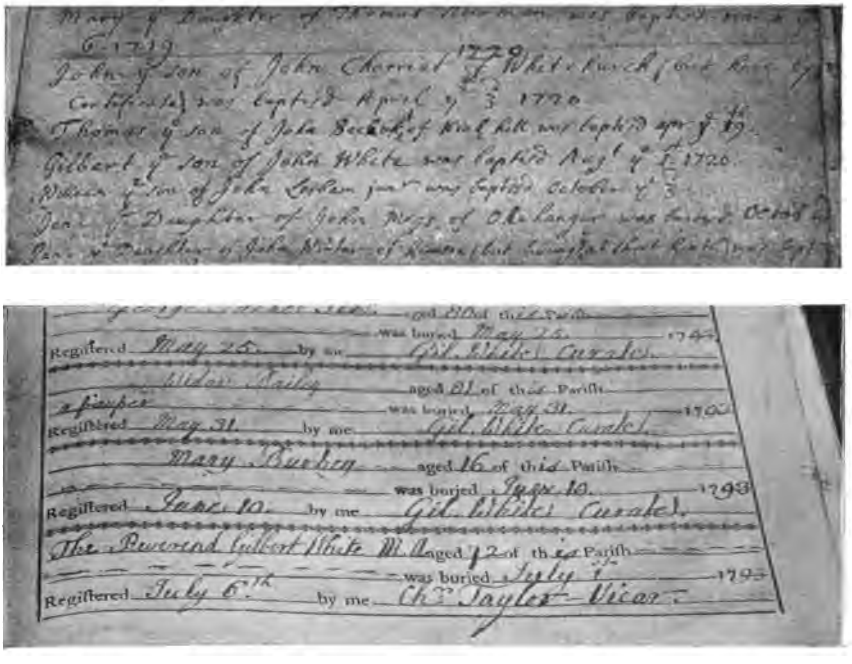
REVIEWS AND EXCHANGES.

Gilbert White of Selborne. By W. H. Mullens. 10 ins. × 6 ins., pp. 32. With 7 Plates. Witherby and Co. Price 2s. 6d. net.

This is a report of a lecture given to the Hastings and St. Leonards Natural History Society, and contains an accurate biography of White, with some account of his family and his correspondents, judicious extracts from the late Professor Newton's Life and Mr. Warde Fowler's Introduction, an excellent account of Selborne, admittedly based upon Dr. Bowdler Sharpe's privately printed "Pilgrimage," and a business-like bibliography of the earlier editions of the "Natural History." The seven plates comprise the Title-page and North View of Selborne Church from the first edition, the View of the Wakes from that of 1813, and one of the house as it now is, together with a somewhat unsatisfactory photograph of the Grave and a somewhat uninteresting interior of the Chancel. But we are especially indebted to Mr. Mullens for giving us photographs from the Parish Registers, which he allows us to reproduce here, together with the quaint tailpiece from Olaus Magnus. With reference to Gilbert White's heterodox theory as to hibernation of swallows, it is comforting—considering the stress laid

De Hirundinibus ab aquis extractis.

(Reproduced, by permission, from "Gilbert White of Selborne," by W. H. Mullens.)


Regiſtered May 26 by me Gil. White Curate
Widow Bailey aged 81 of this Pariſh
was buried May 31 1790
Regiſtered May 31 by me Gil. White Curate
Mary Bushey aged 16 of this Pariſh
was buried June 10 1793
Regiſtered June 10 by me Gil. White Curate
The Reverend Gilbert White M.A aged 72 of this Pariſh
was buried July 7 1793
Regiſtered July 6th by me Chr. Taylor Vicar

SELBORNE PARISH REGISTERS RECORDING GILBERT WHITE'S BAPTISM AND BURIAL.
(Reproduced, by permission, from "Gilbert White of Selborne," by W. H. Mullens.)

upon this amateurish error by such superior persons as the late Mr. Grant Allen —to be reminded that Linnæus also held this opinion. The brochure, which no thorough-going Selbornian can be without, is excellently printed ; but half-a-crown net is a high price for thirty-two pages and seven photographic plates.

The Fairyland of Living Things. By Richard Kearton. 6½ ins. × 4¾ ins., pp. 182. With nearly 140 Illustrations from Photographs. Messrs. Cassell and Co. Price 3s. 6d.

Our children now look forward regularly to a Christmas Natural History book from Mr. Kearton ; and, with the help of his brother's camera, he certainly

FALLOW DEER.
From "The Fairyland of Living Things" (by kind permission of Messrs. Cassell and Co.).

never disappoints expectation. Though birds, as usual, receive the most attention, mammals, snakes, lizards, amphibians, plants and insects, exemplified by British species, are here each dealt with in turn. Though varying much in

interest and to some slight extent in success, the excellence of the numerous photographs may be gauged by the portrait of the Fallow Deer which we are permitted to reproduce.

INTERIOR OF CHURCH OF THE HOLY SEPULCHRE, NORTHAMPTON.
(By kind permission of the Homeland Association.)

Northampton with its Surroundings: Homeland Handbooks. 7 ins. × 4 ins., pp. 112. With Ordnance Map, Coloured Plate of Armorial Bearings, 4 other Plates and 21 other Illustrations. Homeland Association. Price 6d. net.

To many people, doubtless, the name of Northampton will only suggest boot-making, Charles Bradlaugh and Henry Labouchere; and, comprehensive as

Homeland Handbooks always are, we have in this Official Corporation Guide a history of the shoe trade in the town. That the busy town and its environs have many other interests, however, the reader will very soon discover. There is

THE ELEANOR CROSS, HARDINGSTONE.
From "Northampton with its Surroundings" (by kind permission of the Homeland Association).

much history, from the crusading Earl Simon de St. Liz, founder of the Church of the Holy Sepulchre, and the trial of St. Thomas à Becket, to the '45; and not a little architecture, seeing that, in addition to the said round Church of the Holy

Sepulchre, there are within reach an Eleanor Cross and the classical Saxon tower of Earl's Barton; and, if the notes on the local geology, botany, and ornithology are of the briefest, and contribute nothing to the too brief bibliography, Natural History is, at least, not ignored.

The South-Eastern Naturalist for 1907. Edited by J. W. Tutt. 8 ins. × 5 ins., pp. lxiv. and 94. With 19 Plates. Elliot Stock. Price to non-members, 2s. 6d. net.

The members of the Woolwich year of the South-Eastern Union are fortunate. Not only do they receive in this annual volume the valuable Address by Professor Silvanus Thompson, a full report of the Congress and many papers of varied and great interest, but by some financial legerdemain they have also nineteen plates, ten of which, illustrating Dr. Abbott's paper on Concretions, afford a complete atlas of that puzzling subject.

Other Reviews are unavoidably held over.

RECEIVED.—*Onions*, by Horace J. Wright, and *Climbers*, by T. W. Sanders (One & All Garden Books); *Bird-Lore* for September and October; *The Victorian Naturalist*, *The Humane Review*, and *Progress*, for October; and *The Naturalist*, *The Irish Naturalist*, *British Birds*, *Knowledge*, *The Animals' Friend*, *The Agricultural Economist*, and *The Estate Magazine* for November.

SELBORNE SOCIETY NOTICES.

[NOTE.—ALL ANNOUNCEMENTS WITH REGARD TO FUTURE MEETINGS OF THE CENTRAL SOCIETY OR BRANCHES WILL BE FOUND TOGETHER AT THE END OF THESE NOTICES.]

New Members.—The following members were elected at the last meeting of Council. *Central Society:* J. S. Aikman, Esq.; John MacCormac, Esq.; the Rev. Vivian Skrine; C. Stonham, Esq., C.M.G.

Brighton Branch.—Miss May Cozens.

Ealing Branch.—Miss L. Amherst; John J. V. Armstrong, Esq.; George Arthur, Esq., M.B.; W. G. Banfield, Esq.; Mrs. W. G. Banfield; Ernest J. Beard, Esq.; Edward C. Clifford, Esq., R.I.; R. P. Cockburn, Esq., M.D.; Stewart C. Darbyshire, Esq., M.R.C.S.; Capt. C. S. Davies; Wilfrid Farr, Esq.; Capt. R. Ford, R.N.; Aug. de Frey, Esq.; J. T. Goddard, Esq.; A. J. F. Gunning, Esq.; C. E. Hillman, Esq.; Mrs. C. Howard; Charles T. Howard, Esq.; Alexander Hubbard, Esq.; Dr. Arthur Hubbard; Fred. W. James, Esq., F.R.C.S.; Henry C. Jones, Esq.; Mrs. J. E. Eyton Jones; E. W. M. Meeres, Esq.; Miss S. S. Myers; Thomas Nicholson, Esq.; John Milton Offord, Esq., F.R.M.S.; William Edwards Parry, Esq.; Alfred W. Perkins, Esq.; I. Farquhar Philip, Esq.; Ernest W. Poole, Esq.; James Ramsay, Esq.; Robert A. Reid, Esq.; Chas. L. Scholefield, Esq.; Arthur Stephens, Esq.; H. T. Stickland, Esq.; Mrs. C. A. Thompson; H. P. Bowling Trevanion, Esq.; the Rev. W. S. Tupholme; G. Seymour Valentin, Esq.; Dr. Vlasco; Charles Owen Waterhouse, Esq., P.E.S.; Watkin Watkins, Esq.; F. Webb, Esq.; William Henry Whiting, Esq., Sydney E. Williams, Esq.; John Henry Wolfe, Esq., F.R.C.S.; J. C. Worthington, Esq., M.A., M.D.; C. F. Wright, Esq.; Alexander Wyllie, Esq.; Mrs. A. Wyllie; William T. Yeames, Esq., R.A.

Hampstead Branch.—Miss Gertrude Young; Miss H. E. Young.

Subscriptions.—The Council has pleasure in acknowledging the following subscriptions of greater value than 5s.: Miss A. E. F. Barlow, £1 1s.; Mrs. Bevington, £1 1s.; The Right Hon. the Earl of Stamford, £1; His Grace the Archbishop of Canterbury, 10s. 6d.; C. D. Davis, Esq., 10s. 6d.; Mrs. C. D. Davis, 10s. 6d.; Miss Beeching, 10s.; Frederick Crowley, Esq., 10s.; G. B. Milne-Redhead, Esq., 10s.; J. Rawlins, Esq., 10s.

Library.—The Honorary Librarian will attend at 20, Hanover Square, from 6 p.m. to 6.30 p.m., on the evenings of December 16 and January 20, for the purpose of issuing books to members.

The Honorary Librarian has pleasure in announcing the following additions to the Library: Wild Fruits of the Countryside, by F. E. Hulme; Neolithic Dew-Ponds and Cattle-Ways, by A. J. and G. Hubbard; Every Boy's Book of British Natural History, Fifty-two Nature Rambles, and Story of Insect Life, by W. Percival Westell; all kindly presented by the Editor. White's "Selborne," edited by Sir W. Jardine (Sir John Lubbock's Hundred Books), purchased by the Society.

EXCURSIONS.

Saturday, November 23.—A party of forty Selbornians and members of the Ealing Scientific and Microscopical Society assembled to meet Dr. A. B. Rendle, Keeper of the Department of Botany, at the Natural History Museum. Dr. Rendle, in his usual entertaining manner, told the story of the life and achievments of Carl Linnæus, the great Swedish botanist, and described the unique collection of memorials which has been formed to commemorate the bicentenary of his birth. This collection will be exhibited for a few months longer in the second bay on the east side of the Central Hall at the Museum, and as the special guide-book No. 3—which is on sale at the Museum at 3d.—gives a full account of the exhibits, it is unnecessary to recapitulate the details here. All who are interested are recommended to send for a copy.

At the close a hearty vote of thanks was given to Dr. Rendle for his very instructive and interesting address, on the proposition of Mr. W. H. Swain, of the Ealing Society, seconded by Mr. A. W. Oke, Delegate of the Brighton Branch of the Selborne Society.

FORTHCOMING EVENTS.

COUNCIL AND COMMITTEE MEETINGS.

Monday, December 16.—General Purposes Committee at 5.30 p.m.

Monday, January 20.—General Purposes Committee at 5.30 p.m.

Tuesday, January 27, 1908.—Council Meeting at 5.30 p.m.

Saturday, December 7.—The third Autumn Meeting of the South-Eastern Union of Scientific Societies will be held on this date, and will take the form of a visit to the rooms of the Royal Society, Burlington House, Piccadilly (by kind permission of the President and Council). Afternoon tea will be served from 4 to 4.30 p.m. in the ante-room. A brief address will be delivered at 4.30 in the Lecture Theatre by the President of the Union, Professor Silvanus P. Thompson, D.Sc., giving the history of the Society, and mentioning the principal objects of interest in the Society's apartments. The visitors will then be conducted to the library, council-room, &c., and will be shown a number of interesting exhibits, the Charter Book, the Mace (given by Charles II.) Sir Isaac Newton's manuscripts and his reflecting telescope. The attention of visitors will also be directed to the principal portraits in the historic collection. The proceedings will terminate about 5.30 p.m.

Admission can only be obtained by ticket, and every application for the same should be accompanied by a remittance of sixpence per ticket to cover the cost of postage and printing. No charge is made for tea. The tickets are strictly limited in number, and are restricted to members of the affiliated societies, so early application is desirable.

Members of the Selborne Society who wish to attend should apply at once to Mr. H. Norman Gray, Autumn Meetings Hon. Secretary, S.E.U.S.S., 334, Commercial Road, F.

ANSWERS TO CORRESPONDENTS.

M. E. MAGINNISS.—*Chrysopa perla*, one of the "Golden-eyes," belonging to the Family *Hemerobiidæ* of the Sub-Order *Planipennia* of the Order *Neuroptera*. The larva feeds upon aphides.

CHRISTMAS GIFT BOOKS

In pocket size (6¼ by 4½ ins.), cloth gilt, round corners.
Also kept in velvet calf, round corners, gilt edges, boxed (price on application).

POSTAGE 4d.

THE MOTHS OF THE BRITISH ISLES

A Complete Pocket Guide, with Descriptive Text.

7/6 *Net.* **First Series. By RICHARD SOUTH, F.E.S.** **7/6** *Net.*

With 671 accurately Coloured Examples figuring every Species and many Varieties, also Drawings of Egg, Caterpillar, Chrysalis, and Food Plant comprised in the families Sphingidæ to Noctuidæ, together with Illustrations in the Text.

UNIFORM WITH THE ABOVE VOLUME.

In pocket size (6¼ by 4½ ins.), cloth gilt, round corners, price **6s.** net, post free **6s. 4d.**
Also in blue velvet calf, gilt edges, boxed (price on application).

THE BUTTERFLIES OF THE BRITISH ISLES.

By RICHARD SOUTH, F.E.S.

450 Coloured Figures Photographed from Nature of every Species and many Varieties, also Drawings of Eggs, Caterpillar, Chrysalis, and Food Plant, and several descriptive Illustrations in the Text.

FREDERICK WARNE & CO., 15, Bedford Street, Strand, W.C.

In medium 8vo, tastefully printed, suitably bound, and illustrated, 6s. net.

GLEANINGS AFTER TIME:

Chapters in Social and Domestic History. Edited by G. L. APPERSON, I.S.O., Author of "An Idler's Calendar," "Bygone London Life," &c. With forty-one Illustrations.

In this volume regard has been had to the human and domestic side of social history in this country and in America. The papers are arranged in a roughly chronological order, and have been chosen as throwing light on various aspects of that social and domestic life of the past—aside of archæological study and research which has always possessed a great fascination for the general reader of the outer circle as well as for the professed antiquary.

ELLIOT STOCK, 62, PATERNOSTER ROW, LONDON, E.C.

1. All communications for NATURE NOTES must be authenticated with the name and address of the sender, not necessarily for publication.

2. The return of an unaccepted contribution can only be guaranteed when it is accompanied by a stamped and addressed envelope. The Editor cannot undertake to name specimens privately, to return them, or to reply to questions by letter.

3. All communications for any number must be in the Editor's hands by the 10th of the preceding month.

4. Communications for NATURE NOTES (for which no payment is made), books for review, specimens for naming, &c., should be addressed to the Editor, Professor G. S. BOULGER, F.L.S., F.G.S., 11, Onslow Road, Richmond, Surrey.

5. For the supply of the Magazine to others than Members, or for back numbers (except in the case of new Members), address the publishers, with stamps at the rate of 2½d. per number, Messrs. JOHN BALE, SONS AND DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

6. Letters connected with the business of the Society, subscriptions, and applications for membership, should be sent to the local Honorary Secretary, or to the Honorary General Secretary of the Society, WILFRED MARK WEBB, F.L.S., at 20, Hanover Square, London, W.

LIVE STOCK DEPARTMENT.

GAMAGES REQUIRE an ASSISTANT to take charge of their New Live Stock Department. Must thoroughly understand the values, care, etc., of Animals, Birds, Fish, Reptiles, etc. One with knowledge of taxidermy preferred.

Apply or send fullest particulars of qualifications to

A. W. GAMAGE, LTD., Holborn, E.C.

BY SEASHORE, WOOD AND MOORLAND.

By EDWARD STEP, F.L.S.

New Edition. Revised. Copiously Illustrated. **2s. 6d.**

LONDON: S. W. PARTRIDGE & Co., 8 & 9, Paternoster Row, E.C.

Proceedings of the Conference on

THE TEACHING OF HYGIENE AND TEMPERANCE

In the Universities and Schools of the British Empire.

129 pp., price 2s. net.

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, London, W.

BOOKS SUITABLE FOR XMAS PRESENTS.

By EUGEN SANDOW.

The Construction & Reconstruction of the Human Body.

A MANUAL OF THE THERAPEUTICS OF EXERCISE.

With a foreword by Dr. Sir ARTHUR CONAN DOYLE.

Demy 4to, 162 + xxiv. pp., with manikin and 37 full-page plates, cloth, gilt lettered, price **12s. 6d.** net.

BED-TIME FAIRY TALES.

By H. HAMEL-SMITH.

Fcap. 4to, 183 pp., illustrated, price, cloth gilt, **3s. 6d.** net; paper, **1s. 6d.** net.

To be obtained at all Libraries and Booksellers.

JOHN BALE, SONS & DANIELSSON, Ltd., 83-91, Great Titchfield Street, Oxford Street, W.